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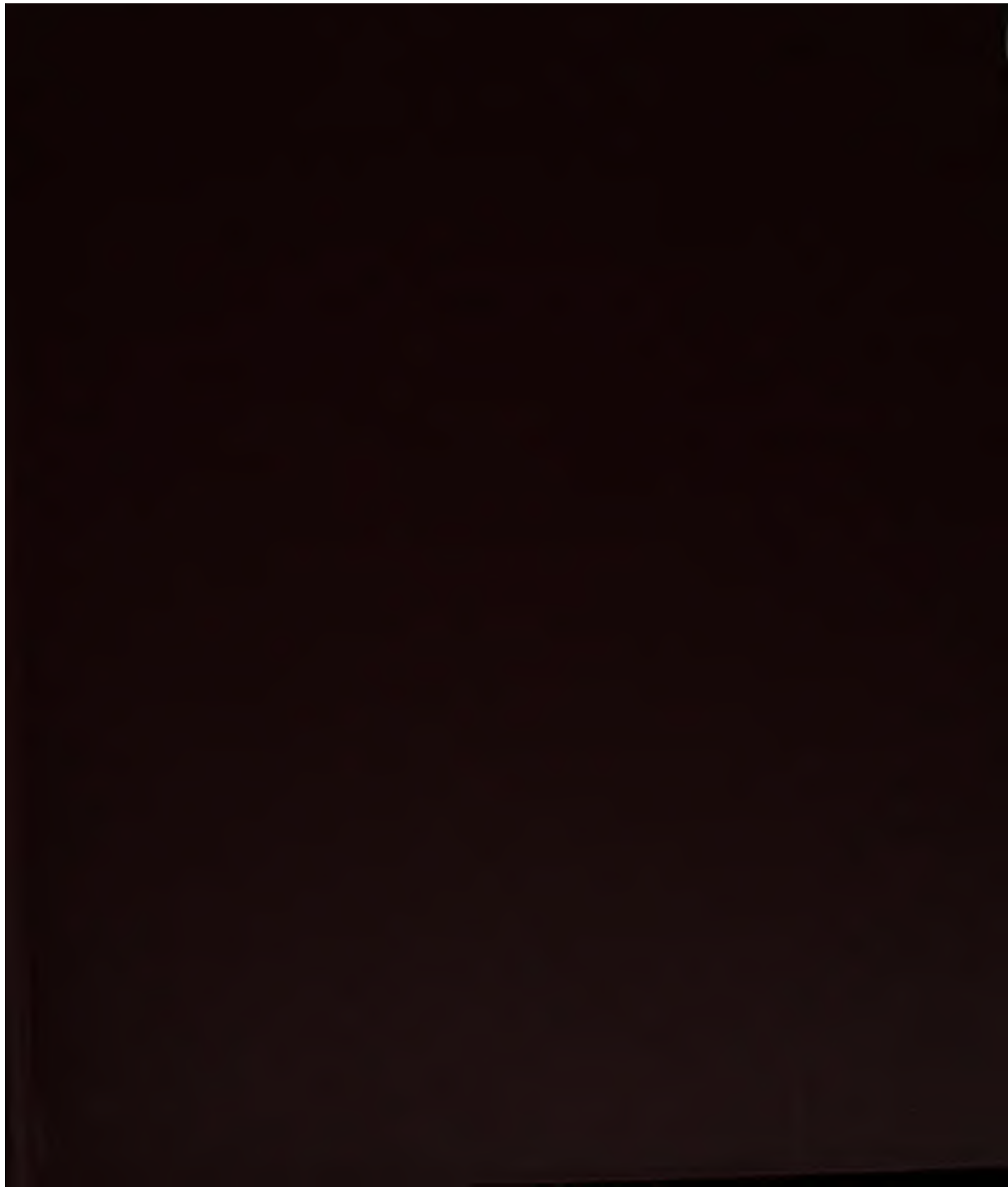
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THE
AMERICAN FARMER,

CONTAINING

ORIGINAL ESSAYS AND SELECTIONS

ON

AGRICULTURE, HORTICULTURE,

RURAL AND DOMESTIC ECONOMY,

AND

INTERNAL IMPROVEMENTS:

WITH

ILLUSTRATIVE ENGRAVINGS AND THE PRICES OF COUNTRY PRODUCE.

JOHN S. SKINNER, EDITOR.

*"O fortunatos nimium sua si bona norint
"Agricolae.".....VIRG.*

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THE
AMERICAN FARMER,

CONTAINING

ORIGINAL ESSAYS AND SELECTIONS

ON

AGRICULTURE, HORTICULTURE,

RURAL AND DOMESTIC ECONOMY,

AND

INTERNAL IMPROVEMENTS:

WITH

ILLUSTRATIVE ENGRAVINGS AND THE PRICES OF COUNTRY PRODUCE.

JOHN S. SKINNER, EDITOR.

*"O fortunatos nimium sua si bona norint
"Agricolae.".....VIRG.*

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AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICES CURRENT.

"O fortunatos nimium sua si bona norint
"Agricolae".....Virg.

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No. 1.

AGRICULTURE.

SCIENTIFIC MEMORANDA—APPLICABLE TO RURAL ECONOMY.

(Continued from p. 411, of last vol.)

Smut.

In lately travelling through a part of New York, I learnt, to my astonishment, that in one of the best wheat towns in Schoharie county, the crop was injured from ten to twenty-five per cent. by smut, and that the farmers knew of no method to prevent the disease. From reading the experiments of scientific men, and from practical knowledge, I know that smut is easily prevented, by salt and lime, or by the latter alone, if properly applied.

The French chemists have multiplied experiments upon this subject; and perhaps there is no school of science, which has devoted more time to improve agriculture than that of France, and none which have come to more correct conclusions. I am going to state the French process for preventing smut, and I pledge myself, that, if correctly followed, it will prove effectual.

This disease is proved, by French and English philosophers, to proceed from microscopic grains, or atoms of black dust, which germinate, reproduce themselves, and take possession of the ear. In the *Bibliothèque Physico Economique*, particular directions are given for steeping the seed, which I am satisfied possess advantages over the method generally pursued. These directions enjoin, that in order to destroy the gum of smut in the seed intended to be sown, 6 or 7 gallons of water must be employed for 4½ bushels of seed, and from 2 lb. 6 to 2 lb. 10 oz. of quick-lime, according as its quality is more or less caustic, or to the greater or less degree of smut in the grain. Boil a part of the water, and slake the lime with it, after which add the remainder of the water. The heat of the whole of the liquid ought to be such as we can with difficulty bear the hand in it. Then gently pour the lime water upon the grain, placed in a tub, stirring it without ceasing, at first with a flat stick, and afterwards with a shovel. The liquor should at first be three or four fingers breadth over the level of the wheat. Leave the grain to soak 24 hours, turning it five or six times, when it may be sown.

Grain limed by immersion does not incommode the sower, like that which is limed in the ordinary way. It adheres like a varnish to the surface of the grain; its germination is quicker, and, as it carries with it moisture enough to develop the embryo, the wheat will not suffer for want of rain; insects will not attack it, as they cannot bear the acid taste of lime.

Independent of the benefit of lime steeping in preventing smut, there will be found, in the 3d volume of the Memoirs of the Board of Agriculture of the state of New York, some cogent reasons for believing, that it is equally efficacious in preventing the depredations of the Hessian fly.

To obtain good timber.

Bark the tree the year before it is cut down. By this means the alburnum is converted into wood.—*Louden's Ency. of Gar.* 174.

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It is the sap in the alburnum, or white wood, which causes timber, rapidly to decay. The sap contains saccharine matter, acids and mucilage which ferment with heat, and bring on a decomposition of the wood. By the process recommended, the moisture is exhausted without fermentation, and the pores of the alburnum contract and harden. Soaking boards and timber in water renders the sap thin, so that when taken out and exposed to the sun, it is more readily expelled. In the process of charring, the moisture is expelled; and not only this, but the coal (carbon) protects the timber from moisture, air and heat, the great agents in the process of putrefaction. Charred wood is said to have been taken out of the ground at Constantinople, in a sound state, which had lain there seven hundred years.

In grasses, as well as in perennial trees and shrubs, there is more soluble matter in winter than in summer, and its specific gravity is greater in consequence of the economy of nature, which lays up nutritive matter for the wants of the plant in spring. *Davy*, 223. The nutritive matter of the grasses is laid up in the joints; and consequently those having most joints are most nutritive. Hence the peculiar value of the agrostis family, particularly florin, for winter pasture. And hence by feeding close in autumn we deprive the roots of grasses of a portion of their natural food, and they do not rise so vigorously in spring as when not fed. Although the stalk be annual, the influence of moisture and heat soften it in spring, and carry the nutriment to the crown; or, decomposing upon the surface, it is carried to the roots through the soil.

The Air

Is the receptacle, as well as the source, of all sub-lunary forms, the great mass or chaos which imparts or receives them. The atmosphere which surrounds our earth contains a mixture of all the active volatile parts of all vegetables, minerals and animals. Whatever perspires, corrupts or exhales, impregnates the air; which, being acted upon by the solar fire, produces within itself all sorts of chemical operations,—dispensing again those salts and spirits, in new generations, which it had received from putrefactions. The air, therefore, is an active mass, composed of numberless different principles, the general source of corruption and generation, in which the seeds of things seem to be latent, ready to appear and produce their own kind whenever they light upon a proper matrix.—*Bishop Berkley, Geor. Ess. vol. 1, p. 348.*

Agricultural Statistics of the county of Essex, England.

The general average of rents according to Vancouver, is 14s. 6d. per acre (about \$3.25,) though some of the meadows are as high as 50s. (more than \$11.) The county is 50 by 60, and contains about 950,000 acres. The total rents paid by the farmers to the landlords is about one million pounds sterling (\$4,444,000.) The tithes amount to 4s. 9d. on the acre, or 225,625l. in the county (\$1,001,775.) The poor rates in 1800, were supposed to amount to half a million:—or

Rents,	936,320, according to Young,
Tithes,	225,625,
Poor rates,	500,000,

—1,661,945l. which divided by the number of acres, (942,720,) gives, as the average charge upon the lands, for rents, tithes and poor rates, 1l. 15s. 3d. (\$7.83) per acre; or, in the gross, \$7,379,035. The capital employed is from 5l. to 10l. the acre, (\$22 to \$44,) and yet the farmer's profits, from the improved mode of cultivation, were greater in 1805 than when the expenses were much less.—*See Young's Survey of Essex, vol. 1.*

Our farmers complain of hard times. Let them reflect upon the preceding facts and be silent. They have no proctors to harass them for tithes. They have no purse-proud landlords to oppress them for rent, and their poor rates are comparatively trifling. Well might they complain if they had to pay annually, beyond their present burthens, seven hundred dollars for every hundred acres they occupied. And yet British farmers, from the wonderful influence of industry, economy and system, are not only enabled to do this, but to lay up handsome profits. It should at least admonish us, that our system of farming is a very defective one; and stimulate us, if we are too old to learn ourselves, to place in the hands of our sons, the means of becoming wiser than their fathers. And let them begin the good work by subscribing for your Farmer.

Of England.

John Clark, in his work in favor of free trade, calculates the capital necessary for British farming as follows: For corn lands from 5l. to 15l.—average 6l. per acre. Total for corn lands 90 millions. Pasture at a medium of 5l.—100 millions, and 10 millions for mountain pasture. Total farming capital 200 millions. One half of the British population employed in agriculture.

Produce.

Corn and pulse,	- - - 70,000,000
All other products,	- - - 85,000,000
	—155,000,000.

Distribution.

Rent,	- - - 40,000,000
Poor rates and other rates	
and tithes,	10,000,000
Farm labor,	- - - 40,000,000
Maintenance of horses,	15,000,000
Manures,	- - - 10,000,000
Support of stock,	- - - 20,000,000
Interest and profit,	- - - 20,000,000
	—155,000,000.

[*Edin. Farm. Mag.* 1821, p. 83.]

Of Norfolk.

Norfolk contains 1,094,400 acres. The soils are, omitting fractions, light sands 140,000, good sands 269,000, marsh-land clay 38,000, various loams 576,000, rich loam 94,000, peat 52,000. Lands valued at from 10 to 50l. or from 44 to 220 dollars per acre.

Memorandum from Young's Survey of Norfolk.

Smut.

It is a remark of many of the Norfolk farmers, that old wheat, sown, never produces smut. Steep-

ing in brine, and drying with fresh slacked lime, is considered an effectual preventive.—p. 299.—An evidence that smut is propagated by seed, the vegetating principle of which is destroyed by age, or lime.

Roots.

Mr. Thurtel, has traced the fibres of the roots of wheat five feet deep, on the side of a marl pit, and the root of a turnip two feet and a half in a light soil—p. 299. The roots of most or all plants penetrate as deep as the soil is tilled; and as their extremities are the mouths which convey food to the plant, the policy of deep ploughing seems to be implied upon all soils which will admit of it, for the double purpose of placing the food where it is most wanted, and where moisture most abounds to digest it, and to counteract the effects of drought.

A good maxim.

Never take two crops of white corn in succession. Mr. Young thinks the preeminence of Norfolk husbandry is principally owing to a strict adherence to this maxim—p. 364.

Arable System.

Mr. Birkham asserted it as a fact, of which he had not the least doubt, that tillage, well managed, would support as much live stock, on the seeds, turnips and straw, as the same land would do all under grass; consequently the corn is all gain to the public. I am certain, says he, it would. He spoke of pasture that would support two bullocks of 40 stone on the acre—p. 367.

Summer Fallows.

Were common 30 years ago, and seeds (grass) were then left three years. Now (1805) no such thing as summer fallows are known, and seeds are left but two years. The number of horses is lessened, ploughings are not so frequent, often but one for barley, and some trust to mere scarifying turnips preceding this crop, and have succeeded well. These and other improvements have increased farm profits one fourth to one third—p. 367.

Plantations.

Mr. Cooke planted, in 20 years, 718 acres of forest trees of various kinds, to the number of 3,123,000—Mr. Bevan, 90,000—p. 382.

Marl

Is applied at the rate of 20 to 100 loads per acre. If in small quantity it is often repeated. 70 loads will suffice for 15 or 16 years, sometimes for 30 or 40—p. 402. The soil is generally a sand, and the marl, composed of clay and lime, mechanically binds it, and improves its capacity for holding water for plants.

Mildew.

Fallowed wheat is more subject to mildew than that sown upon clover lay; dunged more than undunged.—*Young's Essex.* The latter, at least, is apparent to every observing farmer. The reasons have been explained in preceding memoranda.

Shrinkage of Grain.

Grain stacked till April sustained a loss of nearly 35 per cent.—*Farm. Mag.* viii. 26. I have found that Indian corn loses by shrinkage from October to May 20 per cent.

Cure for Hoven.

Train oil, in a dose of one pint to a cow, has been found to give relief in cases of hoven. It is also given to cattle choked with turnips.—*Ib.* 28. Lord Somerville recommends salt for the hoven in sheep.

Rents.

Light sands 6s. loams 16s. better sand 12s. rich loam 26s. marshy clay 28s. per acre, average.

Tithes.

General average 4s. 9d. per acre.

Poor Rates.

5s. 6d. in the pound.

Fences.

A ditch 4 feet wide, 3 deep, the quicks laid in the bank, and a dead bush fence on the top.

Summer Fallowing

Takes place only on strong, wet or clayey soils.

Turnips.

Their cultivation is universal, on all soils, as the basis of a course. They are uniformly manured, and followed by barley. The ground is generally ploughed 4 times for turnips.

Barley.

Produces from 5 to 12 coombs, or 20 to 48 bushels per acre.

Grass Seeds

Are uniformly sown with barley when that follows turnips. Red clover preferred, if the land is not tired of it, at the rate of 12 lbs. Dutch clover, trefoil, rye grass and cocks foot (orchard grass) substituted occasionally.

Wheat,

Generally sown upon clover lays. Average product 6½ coombs, or 27 bushels. From 10 to 12 pecks of seed sown to the acre.

Oats.

Three and four bushels sown on an acre, produce sometimes 100, but on an average from 44 to 46 bushels per acre.

Peas.

Sow from 2 to 4 bushels. Produce 24 to 56.

GRAIN AND GRASS CUTTING MACHINE BY HORSE POWER.

Jeremiah Bailey, begs leave to state to farmers, his belief, that the machine which he has invented, (and devoted many years of his life to the improvement of,) is now as worthy of their attention as any other implement of husbandry, as being the cheapest and most expeditious mode of cutting grain and grasses. A comparative estimate has been made of its performance with that of manual labour. When the grass is heavy and much lodged it is believed the machine will be equal to the labour of twelve men, when the grass is lighter to that of six in the day.

The machine has been much simplified in its construction, and the diameter of the cutting wheel has been increased from 5 feet 6 inches to 7 feet, which gives it a decided advantage in cutting both grain and grass, as its performance is in proportion to the diameter and the distance it progresses in a given time. Farmers are respectfully invited to view this machine, at Daniel Buckley's, Esq. Pequa township, Lancaster county, Penn; Edward Duffield and Samuel Newbold, Moreland township, Philadelphia county (who have had a machine in use for three years) where information can be obtained, also, at Clayton Newbold's and John Black's, Upper Springfield township, Burlington county, New Jersey. Orders directed to Edmund Kinsey, Moreland township, Philadelphia county; Clayton and Newbold, Upper Springfield township, Burlington county, New Jersey, or to the inventor in Philadelphia, Market-Street, near Schuylkill, Sixth-street, will be promptly attended to. The following certificates will show the opinion of respectable and practical farmers and others, as to the utility of this machine.

We the subscribers, having this day witnessed, with much satisfaction, the operation of the mowing

machine invented and patented by Jeremiah Bailey, of Chester county, on a timothy field of Edward Duffield, Esq., do hereby certify that the cutting was clear and uniform, and the swathe handsomely laid over with great expedition, we doubt not at the rate of six acres per day. We consider it as one of the most complete and useful labour saving machines for agricultural uses hitherto invented, and have no doubt its power may be equally well applied to the cutting of any grain crops which could be cradled.

W. J. MILLER,

R. M. LEWIS,

LAURENCE LEWIS.

Philadelphia county, July, 1825.

The subscribers have no hesitation in stating to farmers and the public generally, that we have had the Mowing Machine, invented by Jeremiah Bailey, in use for three years for mowing our grass crops; he this season has adapted it to cutting and laying in regular swathe, both wheat and oats, which adds very much to the value of the machine, and from our experience we recommend it to the attention of farmers as a valuable labour saving machine where the land is properly prepared for its use.

EDWARD DUFFIELD,
SAMUEL NEWBOLD.

Moreland township, Philadelphia }
county, September 13th, 1825. }

We, the undersigned inhabitants of Byberry and Moreland, in Philadelphia county, having seen the operations of Jeremiah Bailey's Patent Mowing Machine, in this neighbourhood, do certify as our opinion, that it fully answers the purposes intended, both for grass and grain; the former, though lodged or bent down by wind or rain, is cut without difficulty, and nearly as fast as when standing upright, and the latter from an experiment made on wheat, we have seen not only cut clean, but laid in swathe so straight and even that it might be raked and bound as readily as if cut by the best cradle or sickle. We recommend it to the attention of farmers as a valuable improvement.

THORNTON WALTON,
JAMES THORNTON,
CYRUS PEIRCE,
JOHN CORNLY,
JOSIAH WALTON,
JAMES WALTON.

8th mo. 19th, 1825.

We, the subscribers, having seen the above mentioned machine in operation in cutting grass, do fully concur in the above statement, from the accounts we had of its operation in cutting grain, have no doubt of its answering a very good purpose.

NATHANIEL RICHARDSON, JR.
JOSHUA GILBERT, JR.
JAMES BONNER,
JNO. P. TOWNSEND,
JAMES TOWNSEND.

INVERNESS-SHIRE FARMING SOCIETY.

SIR JOHN SINCLAIR, in a late address to the Inverness-shire Farming Society, on the agricultural state of the country, stated 'his deep conviction that the greatest exertions would soon become necessary, to prevent the Agricultural Interests from suffering as great, if not greater distresses than those which they had lately experienced. That if the subject were thoroughly investigated, it would appear that the owners and occupiers of the soil, and those who directly or indirectly depended upon them, formed the most numerous, and, he believed, were by far the most valuable part of the community. Their interests, therefore, were to be protected, in preference to those of every other class. They were fixed and permanent residents, whereas the

manufacturing and commercial classes were of a *transitory* nature. They were frequently emigrating to foreign states, and the connexions they formed with other nations, necessarily rendered them less anxious to promote the interests of their own country. That Dr. Adam Smith, the first of political authors, had ably inculcated the doctrine, that wealth obtained from manufactures or commerce, was of little permanent utility, unless when realized in the improvement and cultivation of the soil.

"That if we wished to be either safe at home, or respected abroad, and above all to maintain our military fame and character, it was our bounden duty, not only to protect our agriculture to its present extent, but to augment, *by an increased cultivation of waste lands*, the numbers employed in that branch of industry. That those who work in manufactures, however useful in other respects, are, in general, but little capable of undergoing the fatigues of warfare. Whereas those who have been bred to a country life, have both strength of body and firmness of mind, to carry them through the toils and dangers of war, without inconvenience or distress.

"That now a new competitor for supplying us with Corn is likely to arise, namely, the Pacha of Egypt. That he had already sent immense quantities of Cotton to the British market, with the profits of which he had been enabled to bring the unfortunate inhabitants of Greece to the brink of ruin. That he next intends to supply us with Silk; but if his Corn were admissible, however high the duty that might be imposed upon it, there are no bounds to the mischiefs it would occasion. That Egypt formerly maintained eight millions of inhabitants; and, besides, with its surplus produce, fed Rome and Italy. There are now in it only four millions of people; hence, were the irrigation of the Nile restored to its former state of perfection (which, with the aid of European engineers, might soon be accomplished,) Egypt with its double crops every year, and with so cheap a mode of raising Grain, might furnish our commercial speculators with Wheat, at so low a rate, that our British husbandmen, who must follow a more operose, and a more expensive mode of cultivation, could never rival or resist. Hence an additional argument arises for adhering to the principle of *exclusion*."

THE SUFFOLK COW.

The Suffolk Cow, says an Essex farmer, though small in bulk—she seldom exceeding, when well fattened, 75 stones of 8lbs., and is not of the most inviting appearance—is an invaluable acquisition to a dairy. Cows of this breed, though so small, generally give, after they have had their second calf, if fairly treated as to keep, on the average, 6½ gallons of milk per day, from the time their calf ceases to suck them, till they become dry; and in the year 1823, I knew a Suffolk Cow that gave, on the average, for five months, something more than nine gallons of milk per day. These quantities, and particularly the quantity last mentioned, appear prodigiously great to come from so small an animal; but the following extract from *Young's Farmer's Tour*, which was published in the year 1771, tends to verify their statement:

"In several parts of the preceding minutes," says Mr. Young, "particularly in those of Suffolk, mention is made of Cows often giving 8 gallons of milk per day. This fact is thought very improbable in some other parts of the kingdom; and this induced me, on all occasions that offered, to make minute inquiries into the product of Cows. I can pledge myself for the accuracy of the following statement: Three Cows, one of them a heifer *after her first calf*, the property of the Rev. Mr. Aspin, of Cockfield, in Suffolk, yielded, from June to December, 1770, 633lbs. of butter, the old Cows giving, for some time in the height of the season, each eight

gallons of milk a-day. These Cows were kept on only three acres of grass, without any change of pasturage, till after mowing time, and, in the winter, chiefly on straw. These particulars," says the author, "prove that I have not dealt in romance, when I have spoken of the Suffolk breed; and shew that this poor-looking mongrel animal is, generally, preferable for the pail, to the large Holderness Cow, one of which would have consumed all the food of the above three Cows, without returning half their produce; or to the fine Lancashire breed, that sells for such enormous prices."—*Appendix of vol. 4, page 478.*

AVERAGE ANNUAL IMPORTATION OF GRAIN IN LONDON.

[To a table of the average annual importation in the port of London for the last 16 years, of wheat, flour, barley, malt, oats, beans, peas and linseed—the following remarks are appended by the Editor of the Farmer's Chronicle, in a late number of that Journal—they may be of use to the growers and dealers in these articles in the United States.]

It will be seen from the above statement that the supply of wheat to the London market in the course of last year, was about 173,000 quarters short of the annual average supply of the previous 16 years; whereas that of flour has exceeded the average of the last 12 years by nearly 120,000 sacks. In the year ending Michaelmas, 1822, there was a larger arrival of British wheat into the port of London than in any previous year; since then, however, the supplies have been gradually diminishing, although the intermediate crops are allowed to have been abundant, and the stock of old wheat remaining at the close of the season, when the new crop came to hand, was probably never less:—indeed, with the exception of the foreign wheat lately made free, we may fairly say it was nearly exhausted; and, conceiving every place in the United Kingdom to be supplied, according to their wants, nearly in the same ratio as London, we may draw the conclusion, that the consumption is rapidly overtaking the production; and the gradual advance in the price of wheat within the last few years seems to confirm it.

The crop of wheat this year in the United Kingdom is considered a *full average*, both in quantity and quality; yet it is thought the produce in some of the principal districts in England, such as Essex, Suffolk, Norfolk, and Lincolnshire, will not bear out the reports we had of it a month or six weeks ago; and even with favourable prospects for the next harvest, we do not look for any material decline in prices, excepting what may be caused by a temporary excess in the supplies during the winter and spring months. It is probable, that long before we can reap another crop, this article will recover any thing it may have lost in value; and with a protracted harvest next season, it may be doubted if our crop of wheat will be found more than sufficient for the consumption; for with bad weather during the spring and summer, so as to create an alarm for the ensuing crop, prices are likely to run up very high, even so much so as to open the ports. The Canada wheat that has arrived under the late Act of Parliament, and admitted for consumption, on payment of 5s. per quarter duty, is of ordinary quality, and most of it in bad condition. The quantity arrived, as has already been stated in a previous number, is between 7,000 and 8,000 quarters.

Although the supply of barley last year exceeded the annual average importation for the preceding 12 years, by about 8,000 quarters, still it is considered the stock of old barley, both here and throughout the country, was never more nearly exhausted at the close of any season than last; and *old malt* is also comparatively scarce. The new crop of barley is considered under an average in quantity,

except in some districts of Scotland, Ireland, and the West of England, where the reports of it are more favourable; the quality, however, varies considerably, some of the samples being thin and light, while others are as fine as we ever remember. An unprecedentedly large consumption of this article is expected this season, from the reduction which takes place in the duty on British spirits.

There is no stock of *old oats* in granary here; and if we except Liverpool and Glasgow, we believe the country generally to be in a similar situation. The oats were much injured by the excessive heat during the summer; and this crop is reported to be considerably short of an average. The deficiency in the potato crop will cause an additional consumption of the article both in Scotland and Ireland, and consequently leave those countries less to spare for this and other English markets, which in a material degree depend on them for their supplies.

As the oat crop in the neighbouring counties is very defective, they will probably take a considerable quantity from this market in the course of the season, and it is calculated that a supply of about one million quarters into the port of London will be required before another harvest, to meet the demand; however, as we can scarcely expect such a supply from our own crop, it appears likely we must look to the continent to make up the deficiency.

Beans and peas, like other spring crops, suffered most materially from the drought during summer, and are very defective in quantity in England; but towards the north, and in Scotland, they have succeeded much better. The old stocks are uncommonly small, so that it is expected this kind of grain will bear a high value throughout the season.

Rapeseed is the most defective crop in quantity that we have had in this country for many years.

THE ADVANTAGES OF FALLOW-CROPS OVER SUMMER-FALLOWS.

By James Spenny, of Monroe.

To Jesse BUEL, Esq.

Dear Sir—In answer to your circular, I would observe, that I should not have presumed to furnish matter for a volume of the Memoirs of the Board, had it not been asserted, that "any facts, however simple, would be considered valuable."

I have carefully watched the progress of improvement in agriculture, in order to derive benefit from any system of cultivation, new and useful, which might be proposed. Although many improvements in the business of husbandry have been suggested, which would no doubt be of advantage to the farming interest, were they reduced to practice, yet I shall speak of but one, which I consider the most prominent, and that deserving the greatest attention; and which, if generally introduced, would save to the farmers of this state, annually, many millions. I mean the introduction of fallow crops, and the abandonment of summer-fallows altogether, on green sward. The experience I have had in the system, confirms my belief, that all spring crops, such as oats, peas, barley and potatoes, may be raised on green sward, well ploughed, either in the fall or spring, and rolled with a heavy roller, with less expense in labour, and double the nett profits, than on stubble land; that the expense of tending a corn crop, on ground of that description, and thus managed, would be less than the expense of summer-fallowing; and that good or poor land would not be exhausted as much in growing most of the above crops, with the sod under, unmolested and unexposed, while rotting, as it would be in receiving two or three ploughings, while in a partial state of decomposition, in the heat of summer, exposed to the influence of the sun, rains and winds. The first experiment I made of this kind, was a crop of corn, on a stiff sward of spear grass, ploughed in the fall,

and well harrowed in the spring, without rolling. My crop was 72 bushels to the acre, worth 50 cents per bushel—Nett profits, \$23.30 per acre. The ground was well ploughed once next spring, and sowed to peas: crop, 52 bushels per acre, worth \$1.00 per bushel—Nett profits, \$25.10. The peas were harvested early in September, and the ground well ploughed once, and sowed to wheat: crop, 31 bushels to the acre—Nett profits, \$22.90 to the acre. Nett profits in three years, \$71.30. I have this year raised corn on land adjoining, and of a similar soil and sod, (the soil is what farmers call a sandy loam,) managed in the same way, save only the crop was but once hoed: (wet weather prevented:) crop, 100 bushels to the acre. No manure was used; and not so much labour in tending, as stubble land would have required. In the same field, I sowed 60 roods of ground to flax, and harrowed it in well on the sod. The crop grew well, and was the best I have ever raised on any ground. It fell down, and I pulled it while in blossom; after which I ploughed the ground once, and sowed turnips. The turnips are very fine, and promise a good crop.

Henrietta, Monroe co. Oct. 18, 1824.

ROTATION OF CROPS.

Virginia, March 10, 1826.

The writer of this communication, was honoured in some small degree, with an acquaintance with our Washington; and, among other items in our several conversations, *Farmer Washington* submitted several propositions as to the *proper number*, or divisions of lands, for a complete rotation of crops, applicable to his native state. From 7 to 5 divisions, seemed to have been the numbers contemplated: the *latter* was then preferred. Numberless have been my experiments since; whilst, ultimately, *five* are unquestionably preferred. It remains, therefore, for any one to adopt the system or not; or to discover a better course than, No. 1, corn, 2, wheat, 3, barley, 4, clover, 5, clover; and repeat the cycle, according to varying circumstances and peculiar fitness of soil.

Your respectful

FRIEND.

POTATOES.

Mr. Walker, of Fermoy, has successfully practiced a new and extraordinary mode of cultivating potatoes. It is well known to farmers that potatoes in pits—the general mode of keeping them in this country, till they are wanted for use, throw out a great number of shoots in the Spring. From some of these shoots, in the beginning of last April, Mr. Walker cut as many knots or joints as they afforded, and planted them in drills in his garden, as if they were cuttings of the potato itself, or skillanes, as they are provincially termed. The stalks from these joints appeared in due time, were of uncommon size and luxuriance, and preserved their verdure to a late period of the season. The crop was dug out a few days since, and was very productive. This was the second experiment of the kind which Mr. Walker has tried, and he is so well satisfied with their result, that he intends to cultivate an acre in the same manner next year; to the whole process of which he will invite the attention of the neighbouring farmers as publicly as possible.

HORTICULTURE.

PLUM AND MORELLO CHERRY.

In reply to Mr. Worth, No. 48, v. 7, I will recollect what before escaped my recollection; that the exuded sap of the plum and cherry, even from the immature fruit, at least on exposure to the oxygen of the atmosphere, is uniformly a gum, a vegetable oxide, and never a spongy tumor. This is a philosophical observation within the observation of a philosopher.

denier; and it is one which, in my mind, conclusively destroys so much of Mr. Worth's hypothesis, as regards the *cause* of the tumor. The cherry and plum are incident to a disease called the *gum*, which is believed to be an exudation of the elaborated sap of the tree, caused by bruises and insects. This is corroding, and by wasting the vegetable blood, is prejudicial to the health of the tree; but is accompanied by a depression of the diseased bark,—never by a woody excrescence. When the sap of some trees is obstructed in its natural course, it causes a tumor or swelling in the wood, often of great dimensions, as is instanced in the black ash, oaks, elm, apple, &c. and it is to this anomaly in vegetable development, that the far-famed town of Suffield is indebted for its skill and cunning in manufacturing and vending wooden dishes. But the tumor of the plum and cherry is a gangrene, which soon crumbles into a black powder, and if not removed, poisons and destroys the tree, root and branch.

Although Mr W. professedly abandons scoring as a preventative, he dwells upon its benefits with much stress. The bark of the tree subserves the same purpose as the skin of the animal; and it is conceded by naturalists, that both are capable of distention, without injury, to any extent required by healthful vigour. Instead of aiding nature, by endeavoring to improve upon her laws, we are too apt to mar her works by officiousness. So far as my recollection serves me, Mr. Worth's remark, that seedlings are exempt from the tumor, is liable to exceptions; for I think it is indiscriminately found upon seedlings, sprouts and succors,—the only difference being, that the most thrifty and tender growth, being the most easily punctured by the insect, is most frequently the subject of attack. To this fact I intend to direct my particular attention.

We have cases analogous, in phytography, to the one I assume, of excrescences upon the branches, buds and leaves of vegetables, caused by the puncture of insects,—but none that I know of where the poison injected is so subtle as in that under consideration. There is often found on a species of the thistle, *Carduus pratensis*, an egg shaped swelling, nearly two inches in length and one across. If this bunch is cut open in the month of August, it will be found to contain several large white maggots. It has consequently been occasioned by the puncture of the parent insect depositing its eggs. A peculiar knot or bunch is also found upon the dog-rose. The nucleus, which is from an inch to an inch and a half in diameter, is covered with a long and winged shag, first of a green, and then of a purple color, presenting the appearance of a small bunch of moss. It has been occasioned, like that of the stem of the thistle, by the puncture of an insect depositing its eggs in the tender shoot; for if it is cut open about the month of August, it is found to contain insects.

The reader will not fail to mark the strong analogy between the preceding case, and that of the plum and cherry. The bud is often similarly affected by a species of *Cynips*, that lances its piercer into the heart of the bud while yet tender, and penetrates with its saw into the very pith; injecting at the same time a drop of the corroding liquor contained in its bag, and then laying its egg. The bud being thus wounded, and the juices corrupted by the injected poison, the circulation is not only impeded, but a fermentation is induced, which burns the contiguous parts, and changes their color. The extravasated juice flows round the egg, and is there accumulated and converted into a sort of spongy lump, which vegetates and augments till it forms what is called a gall. Hence the gall upon some species of the oak and upon the *Salix helix*, or rose-willow. A similar puncture of the leaf of a species of the oak, produces the Aleppo galls of commerce, which afford the gallic acid, and are extensively used in dyeing. These analogous cases are cited from Loudon. They are multifarious instances drawn from our

own fields and woods. The insects found in these swellings and excrescences cannot all be a consequence of the disease, because in many cases the tumors are indurated, particularly their outer surface.

In one particular I am disposed to agree with Mr. Worth, viz. that the insect found by Professor Peck, and described as that which punctures the young fruit, is not the cause of the tumor on the plum and cherry. If our controversy shall induce more careful observation, and lead to a discovery of the insect which is the cause of the mischief, we shall both be amply rewarded for our labours, and the public somewhat benefitted.

J. BUEL.

Albany, March 9.

CATALOGUE OF FRUIT AND ORNAMENTAL TREES AND PLANTS,

Cultivated by Daniel Smith, Burlington, N. J. to which is added Observations, &c. on their treatment and culture.

The fruit trees enumerated in the following catalogue, are all grafted or inoculated, and form a selection of a large proportion of the choicest kinds propagated in this country, many of which have been described in a treatise entitled "A view of the cultivation of Fruit Trees," &c. published by Mathew Carey and Son, of Philadelphia, 1817, written by William Coxe, Esq. of this place, to whose extensive orchards the proprietor is indebted for the opportunity of examining many of the kinds of fruit now offered, nearly all of which he has been enabled to identify to his satisfaction, and presents them to the public in confidence of their correctness.

The various kinds of fruit are arranged in the order of ripening according to season.

When trees are wanted for exportation, they can be packed in the most approved manner, either in mats or boxes, safely conveyed to Philadelphia, and delivered agreeably to direction, for which reasonable charges will be made, and if particularly requested, they will be shipped to any port that may be pointed out.

Letters sent by mail or otherwise, will be attended to carefully, and without avoidable delay.

Orders may be left with Benjamin Smith, No. 277, Walnut street; with Daniel B. Smith, druggist, corner of Arch and Sixth streets, or at the office of the United States Gazette, Philadelphia; with Henry Hinsdale, flour merchant, No. 75, Vesey, or 15 Frankford street, New York; Sinclair & Moore, seedsmen, Baltimore; George Drinker, merchant, Alexandria, D. C. and Robert J. Smith, bookseller, Richmond, Virginia; from either of whom catalogues may be had gratis.

It is desirable, that when orders for trees are sent from a distance, payment should be made at Philadelphia when the trees are shipped, or that some responsible person there be referred to.

The prices of trees and plants, will be found at the head of each respective list, with the exception of those noted.

Scions for engrafting, will be furnished for 25 cts. per dozen, if less than one dozen of a kind is wanted, the price will be three cents each. Grape cuttings will also be furnished at 57½ cents per dozen, if less than one dozen is wanted, 4 cents each will be charged: Grapes, however, being but a recent appendage to this establishment, cuttings of a considerable number of the kinds cannot be furnished the present season.

The number on the right of each name denotes the nursery mark; as trees are taken from the nursery, a label is affixed to each kind, marked with the number attached to its proper name.

It seems hardly necessary to say any thing, in refutation of the exploded doctrine, that trees removed from a rich soil to one that is poor, will not thrive so well as when taken from one also poor; this prejudice has not much of its influence with our en-

lightened and experienced farmers and horticulturists; it certainly must be admitted to be of great importance, that trees should be healthy and vigorous before transplanting, to thrive well afterwards, and can it be an objection, though removed into a poorer soil? The subject is treated with great perspicuity by the celebrated English writer, Marshall, and his conclusions are clear and satisfying, he relates instances falling under his own notice, which go far to prove that the prejudice is not well founded.

The kinds marked thus * will not be ready until the fall of 1826.

Apples at 18¢ cents, ripen in July.

White Junating, No. 25; Margaret, or red Junating, 59; Summer Rose, 68; Large early yellow Bough, 31; Large yellow Harvest, 16; Early Sweet Redstreak, 112.

In August.

Scales's large summer Redstreak, No. 37; English Nonsuch, 74; Summer Queen, 5; Large English Codling, 23; Summer Pearmain, 38; Maiden's Blush, 33; Double flowering Chinese Apple, very beautiful, at 25 cents, 97; Siberian Crab, (for preserving,) 90; Red and Green Sweeting, 15; Hagloe (fine large red Summer,) 71.

In September.

Large Fall or Holland Pippin, No. 18; Marriot's or Royal Pearmain, 72; Fania Gusta, from Cyprus, 52; Rambo, Romanite, or Seek-no-farther, 50; Monstrous Pippin, 17; Drap d'Or, 42; Trenton early Red-Streak, 115; Large American spiced Crab, (for preserving,) 132; Rambour d'ete, 83.

In October and November.

Cat-Head, No. 114; Catlin, or Gregson, an admired table and cider fruit of Maryland, 49; Roseau D'Automne, 107; Corlies's Sweet, 101; Taylor's or Freehold Red-Streak, 110; Red Doctor, or Dewit Apple, 24; Metoisée, or French Crab, 109; Carroll's Striped, 102; Barnes' Fancy, 131; American Nonpareil, 60; Pompion, 91; Monstrous Bellflower, 129.

From November to January.

New England Seek-no-farther, No. 80; English Golden Pippin, 19; Reinette Grise, 7; Winter Pearmain, 62; Newark yellow, or French Pippin, 11; Dominé, 54; Brownite, 46; White Doctor, 22; Surprise, yellow without and red within, 95; Craam, 76; Red Sweet Pippin, 73; Rambour Franche, 125; Federal Pearmain, 104; White Calville, 6; Quince Apple, 61.

From December to February.

Bellflower, much admired table fruit, No. 26; Morgan, pleasant table fruit, ripens early and keeps late, 36; Wine Apple, do. 30; Golden Lady, 121; Reinette Franche, 89; Woolman's long Pippin, 92; Granny Winkle, 85; Dumpling Apple, 123; Alexander, a new Russian apple, very large and of great celebrity, 139; Fearn's English Pippin, 134; Golden, or Ruckman's Pearmain, 55; Ladie's Finger, 96; Ribstone Pippin, 81; Newtown Spitzenburgh, 57; Kaighn's Spitzenburgh, 75; Irish Apple, 120; Michael Henry Pippin, 3; Jersey Greening, 43; Wood's Greening, 78; Rhode Island Greening, 41; Roman Stem, 44; Monmouth large green Winter, 14; Cumberland Spice, 64; Black Apple, 28; Sheepnose, Bullock's Pippin or long Tom, a fine eating apple, 113; Winter Queen, 51; Pennock's large red Winter, 45; Red Calville, 84; Coate's red Winter or Sally Apple, 32; Aunt's Apple, [large red] 100; Orange, 27; Pearson's English Pippin, 70; Shippen's Russeting, 4.

From January to April.

English Nonpareil, No. 82; Flushing or Esopus Spitzenburgh, 56; Swaar, 79; Large yellow Newtown Pippin, 1; Hunt's fine Green, do. 9; Newark King, 86; Royal Russet, 94; Pomme d'Apis, or Lady Apple, an admired table fruit, 21; Mansfield large

Red Winter, 89; Long green Pippin, 53; Vandervere, 69; Priestly, 65; Warren Apple, or Varmin's Pippin, 105; Lob, 58; Vout Apple, 111; Tewksbury Winter Blush, 13; Redling, 12; Red Winter Sweeting, 99; American Pippin or Grindstone Apple, 48; Boston, or Roxbury Russeting, 98; Green Everlasting, (will keep a year,) 20; Nine Partners little Russet, (will keep above a year) 88.

(Catalogue to be concluded in next number.)

OBSERVATIONS

Relating to the Planting, Management and Culture, of Fruit Trees and Plants.

Having been frequently applied to by persons about to procure Trees and Plants from this Nursery, for instructions how to plant and manage them, and this happening frequently at a time when the pressure of business rendered it very inconvenient to give the information required, and the success of planting trees depending much upon the treatment they receive after they leave the Nursery, till they have passed the first summer, I offer the following observations for the use of those who may not have had as much experience as myself.

Season of Planting.

The delight peculiarly attached to Spring, in the conduct and management of our rural concerns, may be supposed, naturally to have a strong influence in governing the minds of many, in making choice of the vernal season for transplanting trees, and we are led to attribute to this cause its having become the season most generally adopted, for engaging in this interesting branch of improvement; while it is sufficiently evident, that the weight of experience will be found in favour of planting in the fall, especially in those parts of the country subject to severe droughts; as the trees planted in autumn are less liable to suffer from this cause, than those planted in the spring.

Arrival at their destination.

The first point of importance to be attended to on the arrival of the trees from the Nursery is, to have the bundles carefully opened, and a trench dug in a slanting direction, deep enough to receive the roots below the surface; they should be placed therein and well watered, and then covered with earth made fine and pressed in on all sides, so as to exclude the air, thus to remain until preparation is made to plant them.

Mode of Planting, &c.

The holes for planting should be dug two and a half to three feet in diameter, and about two spits or eighteen inches deep, throwing away the bottom spit and using only the top soil in planting the tree. When the trees are taken from the trench, cut off the ends of the roots and other bruised parts with a sharp knife, and trim the tops pretty freely, leaving them as light as possible, preserving merely the form of a head: shortening the branches is considered injurious, and should be avoided, except when really necessary to preserve the proper form of a head, especially the leading shoot; or when the length is disproportioned to the size of the body, this being a fault not to be remedied in any other way; I would advise leaving the buds, and a few of the small twigs upon the body to grow, with the view of strengthening it, and preventing the bad effects of a disproportionate increase in the size of the top, as from this fault in the trimming I apprehend it is, that the crooked condition of so many orchard trees is to be attributed; the whole growth being thereby thrown into the top, it becomes too heavy to be supported and falls over; the same effect is also produced by another injudicious practice in early trimming, that is, running them higher than the strength of the stem is capable of supporting; by these means young trees not unfrequently sustain another material injury; the strong winds, when they are loaded with leaves, drive them violently about, and if indeed

the stem is not thereby broken, it is left so weak and shaken, as greatly to retard its future growth; for this weakness once produced in the body, is very likely to continue, as in every light breeze it will be liable to the same motion, and consequently prevent nature from repairing the injury, and, as in this condition a tree cannot thrive well, the only remedy seems to be, to reduce the top, and tie it to a strong stake fixed firmly in the ground, with a ligature of straw to pass several times between the stake and the tree, to prevent injury by rubbing. To supply the place of the poor earth thrown away, use the surrounding top soil, or other equally good brought from elsewhere for the purpose; I cannot recommend the use of manure of any kind mixed with the earth in planting, not even earth from the ditch bank, unless very old and perfectly mellow.

If the ground wants enriching, I should prefer a top dressing laid round the tree of stable manure, compost, or ditch mud, after it has been mellowed by frost or putrefaction; this would be safer and answer the purpose much better. In filling up the hole, care should be taken to make the earth fine, and to press it close and compactly round the roots, and those of them inclined to a lateral direction, should be spread so as to lay easy, and by no means forced down or bruised in treading in the earth: the ground immediately round the tree should be left in the form of a basin, in order to receive occasional waterings, which, if the weather is dry, should be frequently given; once a week or ten days, will generally be sufficient if done plentifully, so as effectually to wet the whole space occupied by the roots: some half rotted litter spread round the tree during the summer, would be useful in preventing the rays of the sun and the winds from dissipating the moisture; but it should be removed in the fall as it might be a harbour for mice during the winter, who would be apt to injure the trees by feeding on the bark and roots.

To promote the growth.

It will be proper early in the spring, to examine such trees as have been planted the preceding fall, to ascertain whether the high winds which prevail about the time of breaking up of frost, may have shaken them loose; if this should be the case, it will be important to have the ground trod firmly round the tree again, as the shaking will be otherwise likely to destroy the tender sprouts as fast as they are put forth, and of course the tree must perish. It will be proper to keep the weeds from growing round the tree during the summer months, to effect which a shallow hoeing occasionally would be sufficient; loosening the earth round the tree would be serviceable also, in preparing the ground to receive the dews and rain: it may be proper to remark, that young trees uniformly thrive best where the ground is kept constantly under tillage; where this cannot be done, as in the case of grass plats, lawns, &c. the ground should be dug once or twice a year within the distance of three feet from the tree, and kept free from grass and weeds during the summer; a few shovels full of manure worked in once a year round each tree, whether the ground be tilled or in grass, would contribute essentially to promote their growth.

Apples—soil, aspect, &c. proper.

A southern aspect, admitting the influence of the morning sun and protected from the northern winds, is perhaps the best site for an orchard; a situation a little elevated but not high, the soil a rich loam, with a proportion of calcareous matter, either naturally or artificially mixed with it, would perhaps be the best soil, but all dry lands will produce good apple trees. In very wet or very sandy soils, their duration will be shorter; when cold clay, or quicksand is the basis of light sandy land, perhaps no ground upon which apple trees will grow, is unpromising. As a general rule for judging of

for this purpose, it would I think be safe to estimate its fitness, in proportion as it will produce good wheat and clover.

Planting and cultivation.

The most approved distance for planting apple trees, is from 35 to 45 feet apart, varying according to the strength of soil: they will do well in a sandy soil at 35 feet, but in a rich loam, where the trees will be likely to grow to a large size, 45 feet is sufficiently nigh; in ordinary land, perhaps 40 feet is the best distance. At 35 feet asunder, thirty-five trees may be planted in an acre; at 40 feet, twenty-seven; and at 45 feet, twenty-one. The looser the ground is kept for the first year, and indeed for several succeeding years, the more certain and the more vigorous will be the growth of the orchard. Winter grain, oats, barley and clover, have all been found to be injurious to the newly planted orchard; when the ground cannot be spared from the usual routine of crops, it would be of great advantage to young trees to have the grain or clover dug in early in the season, or well dressed with a hoe within the space of three feet from the tree, forming a circle of the diameter of six feet, and to have it kept open and free from weeds and grass during the summer. Indian corn, potatoes, vines and buckwheat, have all been considered favourable to the growth of orchards.

Pears.

Pear trees while young, require pretty much the same treatment as recommended for apples; they delight most in a deep, strong loamy soil, into which their roots can easily penetrate; a low moist soil is unfavourable, and as they seldom grow to so large a size as apple trees, and their forms being more aspiring, and less inclined to spread, they may be planted much nearer together; from 20 to 30 feet asunder will afford sufficient room. They are subject to a malady almost peculiar to them, called the fire-blight, or brulure, which often injures them very much, and not unfrequently entirely destroys them. I have noticed this disease to attack pear trees in almost every stage of their growth; the time, however, it appears the most decisively destructive, is about the period of their approach to that degree of maturity, which promises a remuneration for the trouble and expense of the anxious, attentive cultivator, and while exhibiting the most flourishing appearance, thrifty, well formed, and increasing fast in size and beauty, almost oppressed with the redundancy of their rich foliage. The cause of this malady has employed the attentive investigation of many ingenious and experienced cultivators, without producing any result entirely satisfactory, or any remedy that I have met with, in my estimation better, than cutting the branches as soon as the blight is discovered, completely below the part affected. I have known trees under this treatment to lose one limb after another until the trunk seemed to be left almost branchless, and afterwards recover and become healthy, flourishing and productive. As soon as the trees have formed good heads, and by the appearance of blossoms promise some fruit, I would recommend to lay the ground in grass and withhold the ordinary portion of manure, suffering it to form a sward immediately round the body of the tree, and to be very sparing in the use of the knife, cutting out only such branches as are others and are likely to injure by rubbing against the trunk, or blight as before noticed.

The best method is to cut them off as soon as they are discovered.

DISEASE

TREES

It is a letter from a distinguished Horticulturist in Massachusetts.

I have read with great pleasure, Mr. Buel's remarks on Mr. Worth's paper, and I feel sure from his very minute observation, that he is right, right. That the disease which attacks the

plum and morello cherry, and our native plants of the genus cerasus, (for they in our woods are nearly destroyed by it) is not owing to an extravasation of the sap, of which the insect avails itself, is perfectly well known to me. I say it with perfect confidence. The disease afflicts the young and the healthy as well as those which are bark bound. It is seen chiefly in the young and healthy branches, and I have opened them within two days after the first rupture, and always found the insect. The destruction of the insect in that stage has uniformly cured the complaint, without any splitting of the bark, a dangerous remedy. It is precisely so with all the other wood eating insects—those which infest the white pine and the locust. By carefully cutting off the diseased limb, on all your trees, you extirpate it from your grounds. I first discovered the cause of the blight in pears, and carried the insect to Prof. Peck. The insect had completely girdled the trees, and they perished. By early excision I have rooted it out of my grounds, and have no doubt we might raise the locust as our ancestors did, by the same care and attention."

RURAL ECONOMY.

NORTH BORDER EWES.

Mr. Alvey, a respectable Beast Salesman in Smithfield, gives the following account of the North Border Ewe flocks, amongst which he says he lived upwards of 20 years:

It is a practice with the farmers on, and near to, the Cheviot Hills, to have milking pens prepared (generally with hurdles, either under cover in stalls, unoccupied stables, or sheds, or in the open air,) a short time before they wean their Lambs and immediately after these are weaned, to begin to milk their Ewes once a day, which they continue to do till within a week of their receiving the annual visit of the Ram. Hence their Ewe-milking season is from the last week in July to the first week in October, during which time their Ewes give, on an average, nearly or quite a pint of milk per day. The operation of milking is, he states, performed by the labourers' children, who will, after a little practice, milk about 30 Ewes each per hour, or, as their morning's milking generally lasts two hours, about 60 in a morning, for which labour they are paid after the rate of 1s. 9d. per week each. Young Ewes, in their first milk are, Mr. A. intimates, a little troublesome for a few mornings; but, as the pens are so contrived as to barely afford space for one Ewe and the child that milks it, they, in a very short time become tractable, and habituated to what dairy-maids term *setting their leg*—after the manner of the most gentle Milch Cow, and will stand quite still, to be milked, even in an open field. Mr. A. says, he knew one flock master, who milked a flock of about 58 score Ewes, for a considerable number of years, and made of their milk, in the shape of butter and cheese, and by selling some of it in its natural state, from 360l. to 390l. each season, exclusive of the expense of milking. Ewe milk, he observes, is very sweet, and though of a bluish tint, exceedingly rich. It is, he states, the opinion of South of England farmers that milking of Ewes must hurt their constitution; but in this, he remarks, they are greatly deceived, the North Border Ewes remaining healthy, and bearing fine Lambs to a greater age than those of any other breed whatever! On being asked how the North Border Ewes stood the winter, Mr. Alvey replied—"Why, they will stand any thing! They are the hardiest devils in the world! If there is no herbage or fodder for them they will eat the hedges, or the mortar out of the walls of their field; or, if there are neither walls nor hedges they will eat the field itself, or at least the world, and what is more, so will our sheep!"

SALTED STRAW.—A farmer in the West of Sussex, having had, from the late Weyhill Fair, 40 Dorset Ewes, he a few days ago gave them, merely to see if they would eat it, some very coarse Barley Straw sprinkled with salt; which fodder, he states, notwithstanding their being in a field of fresh and exceedingly sweet pasturage, that had been laid off on purpose for them, they devoured with the greatest degree of avidity.

HUMANITY TO BEES.—A shoemaker, who resides in the East of Sussex, has, for three following seasons, it is credibly asserted, taken the honey from his bees, without destroying them, by the following simple means: The hive that contains both bees and honey he places bottom upwards, on a form, with a round hole cut in it of sufficient dimensions to receive the crown of the hive, and to keep it in an erect position in its inverted state. Over this hive he places another, well smeared with strong beer and honey mixed together, and filled about half full with sweet flowers, sweet and aromatic shrubs, herbs, &c.—then placing it, rim to rim, over the inverted hive, the bees ascend into it and become so tipsy by feasting on the honey and beer, that they sleep the whole of the next day in their new habitation, consequently, may be removed to any place that might be thought proper, leaving their property behind them, but saving their lives.

JEWS' SYSTEM OF FATTENING GEESE.—A gentleman who has recently travelled in Poland, intimates that the Jews in that country, who are celebrated for their skill in goose-fattening, fatten their geese in the following curious manner. They, he asserts, wrap their geese, if the weather be mild, in coarse linen—if cold, in flannel, first cutting off a small bunch of feathers that stand erect on their rump, on which, it is well known to English goose-feeders, the goose, in the night time, rests its bill, and sucks away a considerable part of its fat. They then hang them up in dark places, and in separate cages, and stopping their ears with small peas, to prevent them from being disturbed by noise, and placing by them plenty of water and gravel, feed them three times a-day, with pellets of malt, or barley-meal, by which treatment their geese become wonderfully fat in an incredibly short space of time.

[The difficulty of fattening poultry in town, which has been brought to it either by land or water, is much complained of, and its cause not well understood. A lady at Annapolis, Mrs. Carroll, whose hospitable table is remarkable for the fatness and delicacy of the poultry to be found upon it, finds no difficulty on this point.—This department is managed by her venerable superintendent, Mrs. Johnson, and as we have understood more after the usual fashion of feeding pigs than poultry; that is, they are fed indiscriminately from the offal of the kitchen, on greens, pot liquor, parings of bacon, and other meats, potatoes, &c. &c. This treatment, so convenient and simple, we are told will never fail to give us, what is so much to be esteemed, good fat plump poultry.—ED. AM. FARM.]

CHINESE METHOD OF REARING DUCKS.—In China the rearing of ducks is an object of great moment. The major part of them are hatched by artificial heat; the eggs, being laid in boxes of sand, are placed on a brick hearth, to which is given a proper heat during the time required for hatching. The ducklings are fed with craw-fish and crabs, boiled and cut small, and afterwards mixed with boiled rice; and in about a fortnight they are able to shift for themselves. The Chinese then provide them with an old step-mother, who leads them where they are to find provender, being first put on board a sampan, or boat, which is destined for their habitation, and from which the whole flock, often, it is said, to the amount of three or four hundred, go out

to feed and return at command. This method is used nine months out of the twelve, for in the colder months it does not succeed.

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

(Continued from p. 351, vol. 7.)

A WHISPER TO THE WIFE.

"Think not, the husband gain'd, that all is done,
The prize of happiness must still be won."

Chapter I.

INTRODUCTORY REMARKS.

GENTLE lady, my whisper to your husband is ended. From you a moment's attention is now claimed by a *widowed wife*, whose bridal morning rose as bright as yours; whose youthful heart loved "with all a woman's love;" and who anxiously wishes to secure for her interesting sisters, that first and most important of all a wife's pursuits—the confidence and affection of her husband.

You are now become a wife; and sacred and important are the duties you have to fulfil. Your husband has bestowed on you the most flattering distinction: he has selected you from the world; and the chain he has put on can be broken only by death! Be it your care never to let him feel this chain, and by your kindness and gentleness make him even forget he wears it.

A bride, wherever she appears, is ever considered an object of importance and a subject for remark. "Have you seen the bride?" is the eager and general question: and what she does, what she says, what she wears, and how she looks, swell the insignificant chat of every gossip's visit. Let the notice which you thus excite make you particularly observant of your manner and conduct; and give the busy whisperer no food for a new sarcasm in the next importation of tittle-tattle.

A bride is generally (indeed I think always,) proud of the new character she has entered on; and unless she is a woman of sense, fond of exhibiting the love she has inspired. Pursue a different course; let your manner to your husband be kind and good-humoured; but sacred to the hours of retirement be those expressions and that display of endearment, which, used in public, argue in loud terms a want of true delicacy, and are ever particularly disagreeable to the spectator.

The first inquiry of a woman after marriage should be, "How shall I continue the love I have inspired? How shall I preserve the heart I have won?" Gentle lady, at the present moment your husband thinks you the loveliest, the gentlest of beings. Destroy not the illusion: be lovely still; be gentle still. The long and dreary road that lies through the wilderness of life is stretched before you; and by a chain, the links of which no human power can break, you are bound to a companion with whom, hand in hand, you must walk through this long, long road. For the sake then of peace, for the sake of happiness, for the sake of *self*, (that most powerful feeling,) brighten the way by endeavouring to make yourself amiable and pleasing to him.

The great Dr. Johnson, with his usual strength of expression, laments, in the following words, the contrasted manner which frequently occurs before and after marriage.—"One would think, the whole endeavour of both parties during the time of courtship is to hinder themselves from being known—to disguise their natural temper and real desires in hypocritical imitation, studied compliance, and continued affectation. From the time that their love is avowed, neither sees the other but in a mask; and the cheat is often managed on both sides with so much art, and discovered afterwards with so

much abruptness, that each has reason to suspect that some transformation has happened on the wedding night, and that by a strange imposture, as in the case of Jacob, one has been courted and another married."

"However discreet your choice has been, time and circumstances alone can sufficiently develop your husband's character: by degrees the discovery will be made that you have married a mortal, and that the object of your affections is not entirely free from the infirmities of human nature. Then it is, that by an impartial survey of your own character, your disappointment may be moderated; and your love, so far from declining, may acquire additional tenderness, from the consciousness that there is room for mutual forbearance."

Chap. II.

ON CONNUBIAL HAPPINESS.

After marriage, a man generally takes his wife to his home, perhaps to the seat of his ancestors, where every object is endeared to him by local attachment and interesting remembrances. With pride and pleasure does he walk out with his fair bride, to exhibit to her the beauties of his domain and the scenes of his youth. "Look," says he, "at that noble view down the river; see that boat, how softly it glides, and that little temple on the hill, where on a fine evening I used to sit with my excellent mother, and say my tasks by her side: she was, in truth, my Emily, an excellent mother; several years have elapsed since I lost her, and yet I cannot think of her but with the strongest feelings of affection and regret." Endeavour, gentle lady, to enter into his feelings, and to admire, and to feel pleased with every thing. In those bridal moments, your smiles and approbation are delightful to him; and although alterations and improvements may occur to you, let him see it is for the sake of those improvements, not for the sake of finding fault, you point out the defect.

Study your husband's temper and character; and be it your pride and pleasure to conform to his wishes. Check at once the first advances to contradiction, even of the most trivial nature. I repeat the word *trivial*, for it is really inconceivable the power which the *veriest trifles* have, at times, over the mind, either in *irritating* or *pleasing*. And the woman, who after a few years are gone by can say, "My husband and I have never yet had a loud or angry debate," is in my opinion better entitled to a chaplet of laurels, than the hero who has fought on the plains of Waterloo.

"There is one simple direction, which, if carefully regarded, might long preserve the tranquillity of the married life, and ensure no inconsiderable portion of connubial happiness to the observers of it; it is, to *beware of the first dispute*."

An admired writer says, "Let it never be forgotten that, during the whole of life, beauty must suffer no diminution from inelegance, but every charm must contribute to keep the heart which it has won. Whatever would have been concealed as a defect from the lover, must with greater diligence be concealed from the husband. The most intimate and tender familiarity cannot surely be supposed to exclude decorum; and there is naturally a delicacy in every mind, which is disgusted at the breach of it, though every mind is not sufficiently attentive to avoid at all times that mode of conduct which it has often itself found offensive. That unwearied solicitude to please, which was once the effect of choice, is now become a duty, and should be considered as a pleasure."

"E'en in the happiest choice, where favouring Heaven
Has equal love and easy fortune given,
Think not, the husband gain'd, that all is done,
The prize of happiness must still be won."

When once you enter the matrimonial state, gentle lady, prepare for the various trials of temper

which each day will produce. Your husband perhaps does, or says, something provoking; your servants do, or say, something provoking;—or some valuable article is injured by their negligence;—a handsome piece of china or glass is broken; a tiresome visitor comes in at a most *mal-apropos* moment, and breaks in on some matter of consequence;—&c. &c. But remember the great Solomon's words:—*He that is slow to anger is better than the mighty; and he that ruleth his spirit than he that taketh a city.*—(Prov. xvi. 32.) By the expression *ruleth his spirit*, the inspired writer's views on the subject are evidently wide and extensive. He alludes to those infirmities of temper and disposition which so often corrode our peace, and make us unamiable and uncomfortable to ourselves and those around us.—When the risings of discontent, peevishness, envy, anger, resentment, or any evil passion, disturb or threaten to take possession of our hearts, *then* is the man *that ruleth his spirit* superior in the eyes of the eastern monarch to the hero returning from the battle or the siege, crowned with laurels and covered with glory! I cannot dismiss this subject without remarking, the very sweet and engaging point of view in which a person appears to me when I see them pliantly yielding their own will to the will of another. A late writer makes the following excellent remark—"Great actions are so often performed from little motives of vanity, self-complacency, and the like, that I am apt to think more highly of the person whom I observe checking a reply to a petulant speech, or even submitting to the judgment of another in *stirring the fire*, than of one who gives away thousands!"

Let your husband be dearer and of more consequence to you than any other human being; and have no hesitation in confessing those feelings to him. Leave father and mother, and brother and sister, and cleave only to him. It is expressly the will of God; for of course the command applies to woman in the same degree as to man. What is any one to you in comparison of your husband? Whom have you a *legal* claim on, gentle lady? Your husband only. Who has sworn by the laws of God and man to support and protect you? Your husband only. Whose *home* have you a *lawful* right to?—whose purse have you a *lawful* claim on? Your husband's only. In whose house do you feel the sweets of independence? and in whose house can you proudly look round you, and say, "I reign as *mistress* here?" Your husband's, and your husband's only. Turn then, gentle lady, to your husband: let his interest, his comforts, his wishes, all be yours; and without hesitation give up for his sake all the world besides. There is an old Irish saying, and like the generality of Irish sayings, expressive and true, the translation of which is as follows: "He must be a very good-for-nothing, indifferent husband, whose bosom is not the best pillow a woman ever laid her head on."

Endeavour to make your husband's habitation alluring and delightful to him. Let it be to him a sanctuary to which his heart may always turn from the ills and anxieties of life. Make it a repose from his cares, a shelter from the *world*—a *home* not for his person only, but for his *heart*. He may meet with *pleasure* in other houses, but let him find *happiness* in his *own*. Should he be dejected, soothe him; should he be silent and thoughtful, or even peevish, make allowances for the defects of human nature, and, by your sweetness, gentleness and good humour, urge him continually to *think*, though he may not say it, "This woman is indeed a comfort to me. I cannot but love her, and requite such gentleness and affection as they deserve."

I know not two female attractions so captivating to men as delicacy and modesty. Let not the familiar intercourse which marriage produces banish such powerful charms. On the contrary, this very familiarity should be your strongest excitement in

endeavouring to preserve them; and believe me, the modesty so pleasing in the *bride*, may always in a great degree be supported by the *wife*.
(To be continued.)

SPORTING OLIO.



CANTON RACES.

SUBSCRIPTION PURSES.—There will be run for over the Canton Course, on the 15th and 16th days of May next, the following subscription purses, free for any horse, mare or gelding, *bona fide*, owned by any person residing in the state of Maryland or District of Columbia—to carry weight, &c., agreeably to the rules of the "Maryland Association," viz:

First Day.

Three mile heats, for a purse of \$250

Second Day.

Two mile heats, for a purse of 150

Third Day.

Proprietor's Silver Cup, free for saddle horses only.

Fourth Day.

Two mile heats, for a Handy Cap purse.

Hour of starting, 12 o'clock each day. The horses to be run, must be entered by a subscriber, with
THE PROPRIETOR.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 24, 1826.

The Index of the last volume is in type, and would have gone out with this number, if we had not been disappointed in a supply of paper.

The receipt of this number will remind our friends that according to the terms of subscription, the advance for this volume is *now due*.—We have to pay the printer, paper maker, clerk, &c. &c. as regularly as the week comes round, and we shall be extremely thankful to those who can, with their own, inclose a like amount from a new subscriber.

THE FINE THOROUGH BRED COLT, advertised by the Editor, is still for sale, at the price named, \$350. Horses of the best English racing blood are getting every day into greater demand; and an opportunity does not often occur of procuring, on terms so moderate, a young horse of such great promise.

The pedigree of Silver-tail, now so called, was given at pages 391-2 of the last vol. From Governor Wright to whom we had written for the pedigree of the dam, (by Vingt-un) we received the following letter, whereby it will be seen that she ran 3 three mile heats in 2½ minutes less than they were run at the great race at Charleston last month—for account of which, see last vol. Am. Farm. p. 407.

DEAR SIR,

Blakeford, March 12, 1826.

I received your letter and inclose you the pedigree of Vingt-un, the sire of Aurora, the dam of your colt. She was a great running mare—won six or seven races, three of them Jockey Club races at Washington; run 3 three mile heats—1 in 5 minutes 48 seconds—2 in 5 minutes 46 seconds—3 in 5 minutes 52 seconds.—At Marlborough, beat Ground Hog, who betted \$300 to \$100 against her, and Mr. Jenifer's mare, a match race.

Yours, &c.

ROBERT WRIGHT.

JOHN S. SKINNER, Esq.

BUFFALOE BERRIES FROM UPPER MISSOURI.

Sir—I have the honour to send you a few buffaloe berry seeds; this berry is peculiar to the upper Missouri, it grows on the banks and small tributary streams of that river in great abundance. The height is about twelve or fifteen feet, its leaf is small and much of the colour of the evergreen, its fruit resembles the currant both in colour and taste, and grows in small clusters under the leaves. The Indians of that country subsist on them for weeks at a time when meat is scarce, they pull them off the trees and eat them as you would other small fruit; I am told they make fine tarts.

Respectfully yours,

B. RILEY.

J. S. SKINNER, Esq.

VIRGINIA.—In the Virginia House of Delegates, the following resolutions have been adopted:

1. That the imposition of taxes and duties, by the Congress of the United States, for the purpose of protecting and encouraging domestic manufactures, is an unconstitutional exercise of power, and is highly oppressive and partial in its operation—ayes 133, noes 23.

2. That the Congress of the United States does not possess the power, under the constitution, to adopt a general system of internal improvements in the States, as a national measure—ayes 128, noes 24.

3. That the appropriation of money by the Congress of the United States, to construct roads and canals in the States, is a violation of the constitution—ayes 127, noes 26.

COMMERCIAL RECORD.

Advices from Liverpool as late as the 28th of January, represent the continuance of extreme embarrassment in the mercantile world—it is said as to *Cotton*, that *old Uplands* may be quoted at from 5½ up to 7½d; the most of the sales are at 6½ a 6¾d per lb. The total business done in *Cotton* in the course of the week amounts to 14,000 bags, of which 8,000 are American Cottons. Our imports are 6,600 bags, of which 5,000 are from the United States. As to *Tobacco*, there has been one failure here this week in the Tobacco Trade, and there are rumours of others being in difficulties. These circumstances naturally tend to depress the market for this article, but on the whole it has remained quite as firm as could have been expected.

Tobacco—York and James River low and inferior, in bond, lb. 3½ to 4d; ordinary and middling 4½ to 6d; fair to fine 6½ to 9d; stemmed 3½ to 9d; Kentucky and Rappahannock Leaf 3½ to 5d; stemmed 5½ to 8d; Carolina and Georgia Leaf 3 to 4½d; Maryland, none; Potomac 3 to 4½d.

In *Baltimore*, nothing has been done in Maryland tobacco, as the purchasers are waiting for further accounts from Europe, and for the new crop, which begins to be inspected freely about the 1st of April. Our quotations are nominal, and higher than the opening of the spring trade, it is believed, will authorize. Seconds, as in qual. \$3 a 8; common crop, 4 a 6; common red, 5 a 7; good red, 8 a 10; fine red, 10 a 15; yellow and red, 16 a 20; yellow, 20 a 25; brown, 5 a 7; fine yellow, 25 a 40; Virginia, good and fine, 6 a 10; Rappahannock, 3½ a 4; Kentucky, fine, \$6 a 8.

CONTENTS OF THIS NUMBER.

Scientific Memoranda, applicable to rural economy, continued—Grain and Grass Cutting Machines—Inverness-shire Farming Society—The Suffolk Cow—Average annual importation of Grain in London—Advantages of Fallow Crops over Summer Fallows—Rotation of Crops—Potatoes—J. Buel on the Plum and Morello cherry—Catalogue of Daniel Smith's Fruit and Ornamental Trees and Plants—North Border Ewes—Humanity to Bees—Jews' system of Fattening Geese—Chinese method of rearing Ducks—Whisper to a Newly-married Fair—Canton Races—Editorial—Commercial Record.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8	8 25		
BACON, and Hams, . .	lb.	7	9 8	12	
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java,	—	16	17	22	25
Havana,	—	15	17	18	20
COTTON, Louisiana, &c.	—	15	17		
Georgia Upland, . .	—	13	15½		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dip,	—	10	11	11	12½
CHEESE,	—	8	10	12	15
FEATHERS, Live, . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	5 00	
Shad, trimmed, . .	—	6		8	
FLAXSEED, Rough, . .	bush	90		1 00	
FLOUR, Superfine, city,	4 25	4 37	5 50	6 25	
Fine,	—	4	4		
Susquehanna, superfi.	—	4		5 00	
FLAX,	lb.	9	11		
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	68	70		
Wheat, Family Flour,	—	80	85		
do. Lawler,	—	75	80		
do. Red,	—	75	80		
do. White Flint, . .	—	2 00			
Rye,	—	60	62		
Barley,	—	90	95		
Clover Seed, Red . .	bush	3 75	4 00	5 00	
Ruta Baga Seed, . .	lb.	1		2 00	
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	2 25		2 50	
Oats,	—	45		50	
Beans, White, . . .	—	1 50		1 75	
HEMP, Russia, clean, .	ton	215	220		
Do. Country, . . .	—	120	130		
HOPS,	lb.	27	28	37	50
HOGS' LARD,	—	9	9½	12	
LEATHER, Soal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45		62	75
Havana, 1st qual. . .	—	25	26½	37½	
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar, .	bbl.	1 75			
Pitch,	—	2			
Turpentine, Soft, . .	—	2 00			
OIL, Whale, common, .	gal.	30		40	50
Spermaceti, winter .	—	70		88	1 00
PORK, Baltimore Mess,	bbl.	12 50			
do. Prime,	—	9 75	10 00		
PLASTER, cargo price,	ton.	5 25			
RICE, fresh,	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	7	8	12
WHISKEY, 1st proof, .	gal.	25½	27	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	none
APPLE BRANDY, 1st pr	—	37½		50	none
SUGARS, Havana White,	c. lb.	13 50		15	16
do. Brown,	—	9 50	10		
Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	23
Lump,	—	16	18	20	
SPICES, Cloves, . . .	—	78		1 00	
Ginger, Ground, . .	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes, . . .	bush	46	48		
Liverpool Blown . .	—	53	55	75	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 20	1 30	2 00	
Lisbon,	—	1 15	1 25	1 50	1 75
Claret,	doz.	4	8	5 00	9 00
Port, first quality, .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40		
do. crossed, . . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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AGRICULTURE.

SCIENTIFIC MEMORANDA—APPLICABLE
TO RURAL ECONOMY.

(Continued from p. 2.)

Corn.

The utility of corn stalks for manure, has been demonstrated upon scientific principles, to an extent I believe not generally apprehended. 1000 parts of dry wheat straw gave 43 parts of ashes; and 1000 parts of those ashes afforded 22.5 of soluble matter. 1000 parts of the stalks of Indian corn (*Zea mays*) gave 84 parts of ashes; and 1000 parts of those ashes afforded 72.56 of soluble matter. See *Davy*, p. 105. Hence 100 pounds of stalks will afford more food to vegetables than 600 lbs. of wheat straw. This is a matter of moment to the farmer who duly appreciates the importance of manure, and affords a strong inducement to extend the cultivation of this useful plant. Corn takes less from the soil, and more from the atmosphere, in consequence of its large system of leaves, than wheat, and consequently is less exhausting. Its average product is three times as great. It serves as food for all animals. Its ordinary price in market is about one half the price of wheat. Both now are about the same price. Fed with unfermented manure, and planted on a clover lay, it is the most certain and profitable grain crop that is grown. On poor or wet ground, badly taken care of, no crop is less profitable. We have corn soils and corn districts, and soils and districts that will not produce it to advantage. When we become wiser, every district will confine its culture to the products for which it is best adapted. We shall hereafter have our wheat districts, our barley districts, our corn districts, and our grazing districts; and an interchange of commodities will take place between them mutually advantageous. Our great error consists in blending all branches of husbandry, when our soil and location are probably only well adapted to a single branch.

Cranberries.

As this fruit is largely employed in most families, some persons may be glad to be informed, that these berries may be preserved several years, merely by drying them a little in the sun, and then stopping them closely in dry bottles. *Parkes*.

Black Cherry—(*prunus cerasus*.)

The gum which exudes from this tree is extremely nutritious; indeed it is equal in every respect to gum arabic. Hasselquist relates that a hundred men, during a siege, were kept alive nearly two months, without any other substance than a little of this gum taken occasionally into the mouth, and suffered gradually to dissolve. *Id.*

Strawberry—(*fragaria vesca*.)

It has been said that this fruit has the property of dissolving the tartareous encrustations upon the teeth; and that hence, those who have been affected with the gout and nephritic diseases (stone, &c.) have found great relief by eating them very freely. *Id.*

Oxalic acid—(the acid of sorrel.)

Readily decomposes sulphate of lime (gypsum.) *Parkes*. This explains why plaster *dways* benefits clover, &c. on the light grounds which abound in sorrel.

Lime

Is an alkaline earth, and when divested of the acid with which it is naturally combined, is caustic like potash. It exists in rocks, in earths, in water, in vegetables, and is the basis of animal bones. It is combined with carbonic acid in common lime stone, chalk, marble, and the shells of marine animals; with sulphuric acid in gypsum; with fluoric acid in Derbyshire spar, from which is manufactured vases

and other ornaments; with phosphoric acid in the bones of animals and shells of eggs. To render carbonate of lime (common lime stone) subservient to agriculture and the arts, the carbonic acid is expelled by heat, in the common process of burning. It thus becomes *caustic*, or *quick* lime. But its value as such is impaired in proportion as it recombines with carbonic acid, which it does rapidly if exposed to the atmosphere. It also possesses a strong affinity for water, and will absorb one fourth of its weight of that fluid; and yet remain perfectly dry. The water becomes solidified, and identified with the earth. The heat, therefore, that is evolved in the process of slacking lime, is the caloric of the water, as it passes to its solid state, and does not proceed from the lime as is sometimes supposed.—*Parkes*. Upon an average every ton of lime stone has been found on experiment, to produce 11 cwt. 1 qr. 4 lbs. of quicklime, weighed before it was cold; and that when exposed to the air it increased in weight daily, at the rate of a hundred weight per ton, for the first five or six days after it was drawn from the kiln.—*Bishop Watson*. These facts suggest the importance of transporting lime, where it is to be used at a distance from the kiln, as soon as possible after it is burnt; and also of using it speedily when its caustic qualities are to be relied on. Slacked lime, therefore, is a combination of 55 parts of lime, and 17 parts of water solidified; and in this state it is called *hydrate* of lime, to denote its union with hydrogen, the principal constituent of water.—See *Davy's Ag. Chem.* p. 283.

Caustic or quick-lime is extensively used in the arts, but I shall confine my present observations to some of its benefits in husbandry.

When lime, freshly burnt or slacked, is mixed with any moist fibrous vegetable matter, there is a strong action between the two, and they form a kind of compost together, of which a part is usually soluble in water. Lime thus renders matter which was before inert, nutritive to vegetables; and as charcoal and oxygen abound in all vegetable matters, quick lime is converted into mild lime by absorbing carbonic acid, which is their joint product. *Davy*. Lime possesses the property of hastening the dissolution and putrefaction of all animal and vegetable matters, and of imparting to the soil the power of retaining a quantity of moisture necessary for the nourishment and vigorous growth of plants. *Parkes*.

Mild lime, powdered lime stone, marles or chalks have no action of this kind upon vegetable matter. By their action they prevent the too rapid decomposition of substances already dissolved; but they have no tendency to form soluble matters. *Davy*. They are mechanically beneficial upon sands, in rendering them more firm and adhesive; and upon clays, in rendering them less so.

The fertility of a soil depends materially (the food of vegetables being alike present) on its absorbent qualities; or the power which it possesses of retaining a quantity of moisture necessary for the nourishment and vigorous growth of plants. When this power is great, *Davy* observes, the plant is supplied with moisture in dry seasons; and the effect of evaporation in the day is counteracted by the absorption of aqueous vapour from the atmosphere, by the interior parts of the soil during the day, and by both the interior and exterior during the night. This shows the importance of keeping the soil loose, even in droughts, in order to render it permeable to the atmosphere and dews. Various soils, dried at 112°, were found by *Davy*, to acquire in an hour, by exposure to a moist air of 62°, an increased weight of from 3 to 18 grains in 1000, in proportion to the vegetable and finely divided matter contained in the different specimens—the absorption being greatest where these most prevailed. Vegetable substances possess the power of absorbing and retaining moisture in the greatest degree. Mild lime, or carbonate

of lime imparts this property to sands in a remarkable degree; and marles are therefore useful on such soils in proportion as they abound in this carbonate.

Pulverization.

Even a free silicious soil will, if left untouched, become too compact for the proper admission of air, rain and heat, and for the free growth of the fibres; and strong upland clays, not submitted to the plough or spade, will, in a few years, be found in the possession of fibrous rooted perennial grasses, which form a clothing on their surface, or strong top-rooted trees, as the oak, which force their way through the interior of the mass. Annuals and ramentaceous rooted herbaceous plants cannot penetrate into such a soil.

The first object then of pulverization is to give scope to the roots of vegetables; for without abundance of these no plant will become vigorous, whatever may be the richness of the soil in which it is placed. The fibres of the roots take up the extract of the soil, or food of the vegetable, in proportion to their number. The more the soil is pulverized, the more these fibres are increased, the more food is absorbed, and the more vigorous does the plant become. *Duhamel and Tull* ascertained by various experiments, that the increase of these fibres was in proportion to the pulverization of the soil; though it is now known, that the vigor of growth, depends, not as *Tull* supposed, entirely upon pulverization, but essentially upon the quantity of food within the reach of the fibres.

A second use of pulverization is to increase the capillary attraction, or sponge like property of soils, by which their humidity is rendered more uniform. To illustrate this let the reader examine his garden during a drought. He will find those parts the most moist where the spade or hoe are most frequently used. They are the most permeable to heat and air, and draw most moisture from the subsoil during the day, and from the atmosphere during the night. Pulverization promotes the access of water, which holds in solution the food, to the roots of the plant.

Another benefit results from the admission of air. Manure is useless in vegetation till it becomes soluble in water, and it would remain useless in a state of solution, if it so abounded as wholly to exclude air, for then the fibres or mouths, unable to perform their functions, would soon decay and rot off.

Earths are bad conductors of heat; and it would be a considerable time before the gradually increasing temperature of spring could communicate its genial warmth to the roots of vegetables, if their lower strata were not heated by some other means. To remove this defect, which always belongs to a close compact soil, it is necessary to have the land open, that there may be a free ingress of the warm air and tepid rains of spring. Animal and vegetable substances, exposed to the alternate action of heat, moisture, light and air, undergo spontaneous decompositions, which would not take place independent of it. Thus pulverization increases the number of the fibrous roots or mouths of plants; facilitates the more speedy and perfect preparation of their food; and conducts it, so prepared, more readily to their roots.—See *Grisenthwaite and Loudon*.

These principles are illustrated by the fertility of a clover lay. The roots of this plant penetrate the soil in every direction; and as they decay, they afford not only the elements of food, but free admission to heat, air and moisture, the agents for preparing this food. A complete pulverization is induced. Hence most crops are benefitted by a clover lay; and probably none more so than Indian corn, which is enabled to multiply its mouths to an incredible extent. It is the property which they possess of pulverizing the soil, that renders almost all root crops meliorating, and proper to precede barley and wheat. The effects of pulverization in multiply

fibres is particularly apparent in trees and shrubs.—Trees taken from a forest are found to possess far less fibrous roots than those taken from a cultivated nursery. This is the reason that forest trees, raised in a nursery, are much more liable to grow, than those taken from uncultivated grounds. Curwen has furnished a remarkable evidence of the benefit of pulverization, in his "Hints on agricultural subjects." He grew thirty-five and an half tons of cabbages, some of them weighing fifty-five pounds, on an acre of stiff clay, in a very dry season; and he imputes the success of the experiment principally to very frequent ploughings which he gave to the crop.

ON DISEASES AND ACCIDENTS OF FARMERS.

Observations on the means of preventing and relieving the accidents and diseases, to which farmers are particularly subject. By JAMES MEASE, M. D.

[From the Memoirs of the Philadelphia Society for promoting Agriculture—Read May, June, July, August, 1825.]

I have frequently had occasion to witness the sufferings, and even the loss of lives, which have taken place among people in the country, owing to their being unacquainted with the dangers, to which, upon certain occasions, they were exposed; through their inattention to an apparently trifling disease or wound, or, to their neglect in applying suitable remedies, in the early stage of a disease; and have therefore thought, that I might render an acceptable service to them, by calling their attention to a few subjects, and by suggesting the means of prevention and relief, which will be found effectual and easy of application. My object is not to supersede the necessity of a physician; on the contrary, if a good one be within reach, he ought to be employed, and at an early stage of an accident or disease; but it often happens that no one may be near, or that no apprehension of present or future danger exists, when there are grounds for serious alarm. In such cases, my advice will be opportune: it may also happen that medical men will derive useful hints from the practice I shall recommend, as I should doubtless do, by reading their own observations on the subjects upon which I shall treat.

Simple incised wounds.—Nothing more is requisite, when the cut is not extensive, than to bind up the part, and to permit the balsamic blood to effect a union of the muscular fibres. The common applications of brown paper, dipped in ardent spirits, and covered with brown sugar; or of balsam-apple infused in spirit, answer no purpose, except that of giving unnecessary pain. When a small vessel has been divided and the blood flows freely, one or more strips of linen or muslin, may be covered with Canada balsam or sticking plaster, and applied to the part across the line of the wound. Even in cases where a portion of flesh has been sliced nearly or entirely off, it should be instantly replaced and covered with the plaster, and lint over it; as under such a circumstance, a union of the divided parts will take place. The bandages should be permitted to remain until the wound is cured; say a week or ten days. The part may then be soaked in warm water, and the bandage cut through with a sharp pair of scissors. Even when the laceration of flesh or skin has been considerable, a union will be effected, provided the parts be united speedily, and covered with the sticking plaster as above directed. Dirt, and all foreign matters, it is obvious, should be removed in the first instance: quiet to the part is indispensable.

Punctured wounds.—When a nail, splinter, or thorn, has penetrated a foot or hand, immediate attention should be paid to the wound, as it is from such a cause that the terrible disease *tetanus*, or

locked jaw proceeds. The part should be covered with lint dipped in spirits of turpentine, and occasionally renewed to excite inflammation in the wound, which must not be allowed to heal for a week or two. This mode has been so well, and so long tested, that it is recommended with confidence. Instances have occurred of tetanus taking place six weeks after a nail or thorn had been run in the foot, and the wound healed. The first symptom of the tetanus is often a severe pain at the pit of the stomach. The rigidity of the jaws and back of the neck, soon follows; and at intervals the body is drawn backward by a violent spasm.

Treatment.—Open the punctured part and fill it with lint dipped in spirits of turpentine. If the spasms are very violent, and the sufferer be a strong man, sixteen ounces of blood may be taken away. The cold bath must then be used, dashing two or three buckets full of cold water in quick succession upon the naked body; after which, powerful friction, with coarse cloths, should be employed, and the patient put to bed. A glass of Madeira wine is then to be given, regularly every half hour, until a powerful impression be made upon the system. It is surprising how much wine may be taken in this disease, even by one not accustomed to the use of it in health; and it must not be withheld from the fear of intoxication. If the disease does not yield to this treatment, the cold bath must be repeated. As the bowels are obstinately costive, they must be opened by ten grains of calomel, and fifteen of jalap, or by castor oil, aided by glysters. Ample experience authorizes me to say that opium, although often given, is useless, and frequently hurtful in this disease, when given internally. It neither relieves the spasm nor procures sleep, and interferes with the treatment which is known to be successful. Externally applied in the form of laudanum, and mixed with oil, it may however be useful by relieving the painful rigidity of the muscles of the jaw and neck. The proportions of each should be equal. The rigid parts ought to be covered with flannel, after being well anointed with the mixture. A large tea-spoonful of Peruvian bark should be given every hour during the disease, and three times a day for some days after recovery. If the treatment recommended should fail in making an impression on the disease, I advise the use of Dr. Hartshorn's plan, of inflaming the surface along the course of the spine by means of caustic potash. The mode is, to tie a piece of sponge to a fork, and after dipping it in a solution of the caustic in water, in the proportion of a drachm to the ounce, and to apply it two or three times along the whole course of the spine.*

Another cause of tetanus is, the exposure of the body during sleep to a current of air, after being heated by exercise, work, or after a hot day. Persons thus exposed are aroused from sleep by spasms of the muscles, and stiff neck. An emetic has been found very beneficial in such cases, as a first remedy. Powerful perspiration should then be excited, by covering the body with blankets and the use of weak snake-root infusion, taken as hot as possible and kept up for three or four hours. If the stomach rejects it, hot lemonade or hot thoroughwort infusion may be taken. If the disease do not yield to this treatment, the cold bath, with powerful frictions, may be used, and the remedies given as before recommended.

If the rigidity of the body do not amount to actual tetanus, the same treatment is still to be pursued. After recovery from either forms of the disease, the body is left in a very weak and irritable state, and in females particularly great care is

to be taken to keep the system in as tranquil a state as possible. Every source of mental irritation must be carefully avoided, and the diet be generous and easy of digestion. A glass of wine, or sound bottled ale or porter occasionally taken, will be highly proper. The disposition to costiveness is to be relieved by mild purgatives of castor oil, or Epsom salts.

Dysentery.—This is a very serious complaint, and deserves particular consideration, inasmuch as it is not like many other diseases, confined to one person, but often prevails as an epidemic through a country town, township, or county. Scarcely a year passes, without the newspapers announcing its prevalence in some part of the United States. The particular symptoms which mark the disease, are frequent calls to stool, with trifling but bloody discharges, attended with great pain in the bowels and loins, and slight fever. The first point to be attended to is to open the bowels thoroughly, by mild purgatives. Epsom or Glauber's salts, and for children magnesia, are to be preferred. An ounce of either of the two first, dissolved in a pint of hot water, to which a grain of tartar emetic should be added, may be taken at two doses in the course of an hour. They should be worked off with thin gruel of corn meal. A prejudice prevails among some physicians, and with people generally, in favour of castor oil as a purgative in this disease; but ample experience warrants me in saying, that it is not supported by fact. This prejudice is grounded upon the supposition, that the oil will sheath the tender and inflamed coats of the intestines, as well as open the bowels: but there is more reason to believe, that the febrile state of the intestines, and the acrimonious nature of their contents, will render the oil rancid, and cause it to prove a source of irritation and increase of disease. It has occurred to me to know of the deaths of several persons by the dysentery, in the year 1816, in Philadelphia, all of whom took repeated doses of castor oil. The safety of the neutral salts has been sanctioned by the practice of the most eminent physicians; exclusively of their purgative property, they are proper from their sedative operation. If the pain in the bowels be severe, and headache and fever attend, twelve ounces of blood should be taken away from a grown person, and a proportional quantity from a youth. Injections of warm water, in which a portion of starch has been mixed, and a tea-spoonful or two of laudanum, will ease the pain in the bowels. Equal parts of laudanum and sweet oil should be rubbed on the belly, and perspiration promoted by covering it with flannel, by lying in bed, and drinking freely of rice-water, in which a stick of cinnamon has been boiled. If it be possible to obtain the inner bark of the slippery elm, it should be infused in water, and the mucilage taken freely and frequently. No article in the materia medica equals this as a demulcent, and its speedy operation in affording relief to the pain in the bowels, in dysentery, has been amply tested. An infusion of the leaves of the béne plant,* has also been used with signal success. If the pain continue violent after the bowels have been well opened, a blister to the belly will seldom fail of relief. In this stage, twenty, thirty, or forty drops of laudanum may be given at night, if sleep cannot be obtained without it.

The salts or magnesia must be repeated, at least every other day, during the continuance of the bloody discharges. When they have ceased, and a simple diarrhoea or lax remains, it may be gradually checked by the use of laudanum at night, and a tea-spoonful of burnt brandy and white sugar, taken frequently in the course of the day. The diet in this disease must consist of the mildest and most

* The medical reader is referred to the case cured by the above treatment, by Dr. Lewis, of Pittsburg, (Med. Recorder, vol. 3, p. 170,) and to the remarks of the author on the subject, in vol. 2, p. 297.

* *Sesamum orientale*. See my account of this remedy in the dysentery. (Coxe's Med. Museum, vol. 2, p. 159, Philad. 1806.)

bland food, as arrow-root jelly, jelly of calves' feet, without wine; or, of flour boiled hard, grated, and then boiled in milk with cinnamon, and sweetened with loaf sugar. The utmost attention to cleanliness in this disease, is indispensable. Nothing offensive must be allowed to remain a minute in the sick room: the sheets, linen, and bed clothes are to be daily changed, and thin lime-wash kept in the chamber utensil.

In very obstinate protracted cases, it is necessary to touch the mouth with mercury. For this purpose two grains of calomel may be given, night and morning, with ten drops of laudanum, until the desired effect be produced. The disease vanishes soon after the mouth becomes sore. But the remedy is not proper in the early stage of the complaint.

When the disease is epidemic, in a town or district, it may be often prevented by taking an occasional dose of Epsom salts or magnesia; by great attention to diet, avoiding unripe fruit and cucumbers, and unnecessary exposure to the night air, the hot sun, or to alternations of heat and cold. The dysentery is not necessarily contagious, but may become so, by inattention to cleanliness. When the disease prevails therefore in a vicinity, all intercourse with the sick, beyond what is required by the calls of humanity should be avoided: the idle night gossiping of servants must be strictly prohibited. Advice respecting cleanliness, when it can with propriety be given, may prevent the spreading of the disease.

The diarrhoea, which often follows dysentery, may be cured by taking a weak watery infusion of the roots of the blackberry or dewberry shrub.

Colic.—This disease proceeds from various causes, as eating acid fruits or flatulent vegetables, drinking acid liquors, exposure to cold, and worms in the bowels. It is sometimes the first symptom of an inflammation of the liver. In every case it should be early attended to, for the pain is not always proportioned to the danger. In simple colic of the bowels, 40 or 50 drops of laudanum, or a grain of opium, if taken within the first hour of attack, will frequently check or cure the disease. Hot spirits and water is the common remedy, but should be avoided. Whether sleep be, or be not obtained from the use of laudanum, it is indispensably necessary to open the bowels thoroughly, by taking an ounce of Epsom salts, dissolved in a pint of water, or a dose of castor oil, to be worked off with thin corn meal gruel, to which a little salt has been added. Bathing the feet in warm water will aid the operation of the medicine, and tend to relieve the pain. When the bowels are obstinately bound, a laxative injection should be given.* During the operation of the medicine or injection, care must be taken to avoid exposure to cold. If the pain return after the bowels shall have been opened, twenty or thirty drops of laudanum, may be taken every half hour, until relief be obtained. The warm bath should also be used, and will speedily ease the pain. For want of a proper bathing tub, a large washing tub may be used. In this the person may sit on a stool, surrounded by a blanket, with his head out, and bathe his belly with the water: or if he cannot do this, let him sit over very hot water, having his feet in a smaller tub of water less heated, for half an hour: he should then be speedily wiped dry, put to bed between warm blankets, and take a draught of weak warm ginger or mint tea. Children in whom colicks frequently occur, are to be treated in the same way: they can be immersed in warm water. In infants and young children, pains in the bowels

*This may be composed of a pint of warm water, a wine-glass full of sweet oil, or melted hogs' fat, one do. of molasses, and one large tea-spoonful of table salt. A pewter syringe should always be used in preference to a bladder and pipe.

are commonly caused by superabundance of acid in the stomach and bowels. The proper purge for them is calcined magnesia, (a medicine which operates in a small dose,) mixed with peppermint infusion, or essence of peppermint and water. As it is perfectly safe, great caution in the dose is not necessary, one or two tea-spoonful may be given in water.

When the pain in the bowels is very severe in grown persons, or has been permitted to continue for some hours, without any medicine being taken, twelve ounces of blood should, if possible be lost, in addition to the other means prescribed. If the pain do not abate, apply thirty or forty leeches to the belly.

Persons habitually subject to colick should carefully avoid wet feet, exposure to rain, or to a draught of air when warm. Attention to diet is also requisite. Those who indulge in articles of diet or drink, which, however pleasant, are known by them to be injurious, deserve no pity if disease follow their use. In winter, they should wear a flannel shirt, and regularly change it once a week. In warm weather a muslin shirt, under that commonly worn, should be substituted, and changed at least thrice a week. The feet may be kept dry by wearing over-shoes of leather: or for short walks, shoes with wooden soles and leather vamps. If the soles be divided, and connected by a piece of leather, the wearer will be enabled to walk more easily.

(To be continued.)

WHITE FLINT WHEAT.

MR. SKINNER, Washington, March 20, 1826.

Dear Sir,—I now sit down to answer the inquiries made by Mr. E. Watson, which you had the goodness to enclose me. The flint wheat which Mr. Watson speaks of has not been introduced into our part of the country, generally; few of the farmers have been able to obtain it, the price is so high, but few would purchase if an opportunity presented, for myself I cannot say any thing in favour of or against it, I have never sown any till last September.

The field of wheat which Mr. Watson wishes information respecting, the seed and quantity, and the manner of preparing the land. The field contained thirty-six acres, being summer fallowed, after peas, covered with barn-yard manure in the month of May, in its rough state; as soon as it was spread it was ploughed under to prevent the sun and rains from destroying any of its quality. The field was sown the 11th of September, 1824, with fifty bushels of the red chaffed white wheat, which has been the wheat mostly raised in the state of Vermont, for ten or fifteen years past. Ploughed four times and harrowed twice, with one thousand loads of manure in its rough state; ploughed under by the first of June. I commenced reaping by the 14th of July, 1825. Experience has taught me to cut wheat with the joints of the straw quite green, particularly the red chaffed white wheat, when fully ripe it shells very much and more subject to grow in the field than any other kind that I have been acquainted with; believing it to yield more the acre than any other kind of wheat; I have sown it for ten years past. The 36 acres abovementioned produced sixteen hundred bushels of the red chaffed white bold wheat.

From long experience, I have been convinced that manure should be drawn from the barn-yards early in the spring, before decomposition takes place, and ploughed under in its rough state particularly, for wheat by continued ploughing through the summer, say four or five times, the whole ground feels its effects; otherwise if it is piled in the spring, and what is commonly called, left to rot in heaps, and drawn on the fallow before the last ploughing and spread in the best manner possible, there will be here and there a poor spot, and the rich ones quite

too strong; but when ploughed under early in its rough state, the whole ground becomes impregnated with the manure; you cannot discover one spot better than another.

I consider that one third more wheat can be raised from the same manure by drawing it out in the spring before decomposition takes place, than to pile the manure and let it remain in heaps till July and August. It should be ploughed under as soon as it is spread, and not remain long in the field without spreading. My observations are particularly for barn-yard manure.

Yours,

C. MUCH.

COTTON PRESSES.

Petersburg, March 16, 1826.

Sir,—I observe in your valuable paper of 2d inst. (No. 50,) a sketch of my Cotton Press, which is very correct, and for which I am much obliged to Mr. Smith. I have since built several in the country, which have given great satisfaction; perhaps it ought to be stated that it can be built and worked in a room of but nine feet pitch, the mouth being even with the floor of the blow room, and that the whole cotton (say 400 lbs.) is put in at once; any person wishing a press, can (by sending me \$20,) be furnished with directions, by which any mechanic can build one; it can also be adapted to pressing hay, and other articles.

Respectfully,

CHARLES WILLIAMS.

HORTICULTURE.

CATALOGUE OF FRUIT AND ORNAMENTAL TREES AND PLANTS,

Cultivated by Daniel Smith, Burlington, N. J. to which is added Observations, &c. on their treatment and culture.

(Concluded from page 6.)

Cider Apples.*

Styre, English No. 63; East Jersey Red-Streak 124; English or Duchess county Red-Streak, with coloured flesh 66; Grey or Maryland Red-Streak 127; Black or Virginia do. 126; Harrison Apple 40; Campfield 35; Hewes's Virginia Crab 29; Roane's White do. 103; Belt's Berton do. 128; Bucks county or Solebury Cider Apple, T. 34; Gloucester White, of Virginia T. 10; Oilpin or Darthouse T. 47; Cann 117; Winesap T. 122; Cooper's Russeting T. 2; House or Greyhouse T. 67; Witherell's white Sweeting T. 110; Golden Renet 87.

Peaches—12½ cents.†

Scarlet Nutmeg 17; Yellow do. 83; White do. 22; Early Ann 5; Livingston's N. York rare-ripe 36; Haines's early Red Freestone 59; Morris's Red rare-ripe 16; Monsieur Jean 1; *Red Magdalene, very fine 90; Sweet Water 24; Early White C. 36; Alberge or Yellow rare-ripe 60; Large early York 20; Royal Kensington 56; Coate's early Yellow Freestone 70; Malta large Freestone 33; Large early Red Freestone 3; Prince's Red rare ripe 31; Early Newington C. 15; Diana C. 12; White blossom or Willow Peach 18; Orange Peach 34; English Swallow or Incomparable 27; Oldmixon Freestone 6; President 38; White luscious rare ripe or white cheek Malacotan 39; Freestone Heath 19; Large Red Freestone 4; Cole's Morris Red 43; Nagle's favourite large Yellow Freestone 65; Bell-chevreuse 50; Red Catharine 48; Pine Apple C. 84; Royal George C. 14; *Tiendoux C. 66; Rose or double blossom 25; Yellow Pine Apple or Lemon C. 10; Largest Lemon C. 45; Hill's Madeira 35; Red cheek Malacotan 29; White Pine Apple C. 41;

* T denotes those which are good table fruit also.

† C denotes clingstone.

Washington C. 28; *Montrieul, large Red Freestone 91; Congress C. 80; Oldmixon C. 11; Modeste 64; Rodman's Red C. 23; Red Pine Apple, Freestone 47; Columbia 2; Binney's Red C. 21; *Bourquinion, Red Freestone 89; Spanish C. 53; Golden Purple 82; *Nonpareil, largest of Freestone Peaches 92; Yellow Preserving 9; *Late red Freestone 93; Favourite, large Red Freestone 57; Teton de Venus 55; Taylor's late large Yellow Freestone 72; Claret Clingstone 61; Old Newington C. 79; Large late Newington C. 44; Rodman's late Yellow Freestone 13; Late Admirable 85; Late Freestone Heath 77; Large Yellow Freestone 8; Latest Yellow Freestone 63; Large late Heath C. 42; Algiers Winter C. 58; Green Winter 51.

Nectarines—25 cents.

Early Scarlet, No. 9; Red Roman C. 4; Aromatic 2; Temple 1; Peterborough 6; Newington C. 7; Fairchild's C. 3; Elruge 10; Argyle 5; Golden C. 8; Vermash 11.

Apricots—25 cents.

Large Early 2; Large Brussels 1; Masculine 14; Blanche 7; Gold Blotched 8; Algiers 5; Moorpark 12; Peach 4; Apricot De Nancy 15; Orange 11; Royal Persian 3; Breda 9; Grover's fine Breda 6; Black 10; Evans' large 13.

Plums—37½ cents.

Cherry or Mirobalan 14; Chicasaw 20; Newton's early blue 50; Drap d'Or 5; *Reine Claude 58; Green Gage 10; White do. 35; Blue do. 8; Peter's large Yellow do. 38; *Newton's do. 53; Bolmer's Washington, from New York, has measured above 6 inches round 43; Large Blue 37; Landreth's Magnum Bonum 19; German Prune 39; *Fotheringham 57; Orleans 3; *Coe's Golden Drop 56; Large long blue 36; Newton's long blue 51; Elfrey's 2; *Lex's 55; Burlington fine Red 6; Blue Holland 17; *Great German Quetzer 59; Gwalsh 30; *Wetherill's large 60; Swiss Plum 49; French Copper 11; French Green 4; Muscle Plum 27; *D'Amature 64; Bingham 34; Cooper's large Red 7; *Blue Mirobalan 65; Apricot Plum 18; Red Imperial, Magnum Bonum 22; White Imperial, Magnum Bonum, or Egg Plum 1; *White, or Apricot Mirobalan 66; Large Black Imperial, Magnum Bonum 40; Violet Hative 9; Large French Blue 32; Fall Copper 12; Miller's Spanish 42; Mogul 13; Blue Damascene 24; Wetherill's Sweet 25; White winter Damascene 23.

Almonds—25 cents.

Soft Shell No. 2; Thin Shell, or Ladies 3; Hard Shell 1; Double Flowering, or Dwarf 4.

Pears—25 cents.

Primitive, or Petit Muscat No. 19; Oignonette 37; Poire d'Ange, or Hativeau 4; Early Chaumontelle, Green Chissel, or Madeline 16; Early Catharine 50; Early Bergamotte 6; Bellesime 14; Golden summer Bergamotte 43; *Petit Roussellet De Rheims 57; Auratte 36; Early Bell 13; Skinless, or Poire sans Peau 5; Jargonelle 8; Julienne Archiduc d'Ete, or Summer Beurre 30; Red Bergamotte 12; Bonne Grise 39; Large Sugar, or Bon Chretien d'Ete Musqué 29; Musk, Spice, or Roussellet de Rheims 33; Washington (very melting) 38; Green Catharine 32; Beurre du Roi, or Butter Pear 1; *Grey Butter, or Buerrée Grise 55; Seckel Pear 25; Crane 2; *Grosse Bergamotte 63; Brown Beurre 27; *Poir D'Adam 62; Culottes de Suisse, or Verte longue panache 20; *Red Musk, or Muscat Rouge 32; Mouillebouche, or Verte longue 21; Cuisse Madame 24; *Swans Egg 41; Ambrette 56; Orange Bergamotte 51; Broca's Bergamotte 17; *Prince's St. Germain 46; Autumn Bergamotte 7; *Satin 61; *Reine Bergamotte 11; *Autumn Bounty 49; Holland Green 47; Poire d'Adam 53; Harrison's large 15; *Winter 10; *D'Amature 64; *Bingham 34; *Cooper's large Red 7; *Blue Mirobalan 65; *Apricot Plum 18; *Red Imperial, Magnum Bonum 22; *White Imperial, Magnum Bonum, or Egg Plum 1; *White, or Apricot Mirobalan 66; *Large Black Imperial, Magnum Bonum 40; *Violet Hative 9; *Large French Blue 32; *Fall Copper 12; *Miller's Spanish 42; *Mogul 13; *Blue Damascene 24; *Wetherill's Sweet 25; *White winter Damascene 23.

*Lechasserie 59; Bergamotte Sylvaniche 34; Muscat Allemand 35; Egg Pear 26; *Winter Vergoulouse 58; French winter Vergoulouse 22; Cape May winter Bergamotte 10; Royal Winter, or Paddington 18; Brown's Winter 48; Tilton, or Ambrette 40; St. Germain 3; Winter Roussellet 42; Large Cordelier, or Pound 15.

Cherries—37½ cents.

Virginia May 1; May Duke, or Griotte de Hollande 2; Swedish, or Belle Chevreuse 14; Turkish Begarreaux 25; White Heart 3; Bleeding Heart 7; Fraser's White Tartarian 35; Fraser's Black do. 29; Elkhorne 31; Yellow Spanish 30; June Duke, or Holeman's Duke 10; Griotte d'Allemagne 11; Amber 18; *Graffion 39; Black Courone 32; Large Honey Cherry, (very fine) 17; *Harrison Heart 40; *Begarreaux Blanch, or White Amber 42; *Begarreaux Rouge 43; Ox-Heart 5; Tradescant 19; Black Orleans 16; Montmorency 12; Large Black Heart 23; Carnation 4; *Large French do. 44; Large late Bleeding Heart 8; Late Arch Duke 22; Late Spanish 33; Mammoth, or German Duke 9; Plumstone Morello 34; Double Blossom 13; All Saints, or pendant flowering Cluster 21; Kentish early Pie Cherry 24; Large Morello 26; Small do. 27.

Quinces—25 cents.

Pear Quince No. 1; Orange do. 2; Portugal 3.

Figs—50 cents, to \$3, according to size.

Brown (the best bearer) No. 1; Large Brown 2; Large White Genoa 3.

Gooseberries—25 cents.

RED.

Burlington Red No. 1; *Crow Bob 3; *Brundit's Atlas 4; *Dean's Glory of England 5; *Ironmonger 6; *Red Bullfinch 7; *Large Red 29; *Brown Royal 32; *Large oval Red 38; *Black 37; Smooth Claret 35; *Warrington 39; *Bullfinch 41; *Large Amber 49; Small Amber, abundant bearers and free of smut 54.

YELLOW.

*Taylor's Golden Talent 9; Golden Drop 10; *Rocket's Yellow 11; *Long Yellow 12; Transparent Yellow 23.

GREEN.

*Green Walnut 13; Satisfaction 14; Green Chissel 15; *Ville de Paris 16; Green Gascoigne 17; English Green 25; *Irish do. 26; Large Round do. 27; *Porcupine 28; Ne plus ultra 42; *Dorington 43; Duke of Bedford 44; *Blakely's Chissel 45; *Allen's Glory of Ratcliff 46; *Green Oak 47; Green Walnut 51; *Green Blush 52; *King's Pendant 53.

WHITE.

*Fowld's White No. 19; *Snowball 21; Wood's Whitesmith 31; Transparent White 36; *English Grey 30.

Currents—12½ cents.

Common Red No. 11; Common White 10; Large Red Dutch 1; Large White do. 2; Large Champagne pale red 3; English Red 8; English White 9; American Black 5; Large Black English 4; Missouri Currant with fragrant showy Yellow blossoms, discovered by Lewis and Clark, in passing through Louisiana, to the Pacific Ocean, 25 cts. 6.

Raspberries—12½ cents.

English White No. 3; English Red 64, 4; Large White Antwerp 18½, 1; Large Red do. 2; Brentford Red 6; American Scarlet 64, 7; American Black do. 8; Canada, or purple rose flowering 9.

Strawberries—12½ cents per dozen.

Morrisania early Scarlet 1; English Red wood, haut bois 2; English White do. 3; Large Pine Apple 18½, 9; Large Hudson 4; White or Blush Chili 6; Red Chili 5; Bourbon Blue, or large, 15, 8; Alpine or Month

Grapes—25 cents.

Early White Muscadine, or Summer Sweet Water 61; Resin de Notre dame Tasust 54; July Grape, Morillon Noir Hative, or Early Black Cluster 30; White Sweet Water 4; Malvoisie 50; Muenier or Miller 51; Burgundy or Miller Grape 2; Auvergnenoir, True Burgundy, or Black Morillon 51; *Black Madeira 31; Bland's Pale Red, or Powell's Grape 3; Ralston's White 55; Boudinot Grape 58; White Tokay 63; Blue Cartager 64; Montesquieu 15; Assyrian 17; Grotzen 36; Savignion's Red 51; Chasselas 53; *Black Muscadine 27; Clapier's White 9; *Large Blue Seedling, from the White Malaga 10; Large White Malaga 12; Red Frontignac 32; Bordeaux Purple 33; Chocolate 34; Connelley's Grape 35; White Lisbon 16; Elliot's Large White 19; Black Hamburg 41; *Black Lisbon 42.

Native.

*Early White No. 49; Smart's Elsingborough 1; Isabella 7; *Scuppernon 8; Orwigsburgh 11; Missouri Grape 48; Alaxander's or Schuylkill Muscadine 26; Cooper's Wine Grape 37; Jordon's Blue, large fruit, and large bunches 45.

Forest Trees, of the first class.

White flowering Horse Chestnut 37½, 1; Scarlet flowering do. do. 2; Sugar Maple 25, 3; Silver leaved do. do. 4; Scarlet flowering do. 5; Spanish Chestnut with large eatable fruit 37½, 6; American do. 25, 7; Catalapa, admired for its showy flowers do. 8; American Cypress, of fine appearance 50, 9; Honey Locust, or Thorny Acacia 25, 10; Common Locust, or Robinia Pseudacacia do. 11; Kentucky Coffee tree, or Bonduc, with spikes of purple flowers 37½, 12; Madeira Nut, or English Walnut do. 13; Round Black Walnut 25, 14; Butternut do. 15; White Walnut, or Shell Bark Hickory Nut do. 16; Pecan, or Illinois Nut 37½, 17; Tulip tree, or White Wood, stately and very ornamental 50, 18; American Larch or Ilacmatac do. 19; American Plane, or Buttonwood 25, 20; Lombardy Poplar do. 21; Athenian do. 22; Georgia do. or Cotton tree do. 23; American, or Shaking Aspin do. 24; American Bird Cherry do. 25; Weeping Willow do. 26; Upright Green Willow do. 27; Yellow, or Golden do. 28; European Linden or Lime 75 to 125, 29; Red twigged do. do. 30; American do. or Basswood 50 to 100, 31; Chinese aianthees, by some called Tallow tree, or Tanner's Sumach 25 to 50, 32; Black Birch 25, 33; Paper Birch do. 34; Maple leaved Sweet Gum do. 35; Sour Gum do. 36; Sassafras do. 37; White Ash do. 38.

Second Class.

Prickly Ash, Angelica, or Hercules's Club 25, 39; European Judas tree, covered with showy purple flowers in the spring, before the leaves appear 37½, 40; American do. much like the above do. 41; White Fringe tree, with flowers resembling cut paper 50, 42; White flowering Dogwood 25, 43; Laburnum, admired for its clusters of Yellow flowers do. 44; Persimmon or American Medlar do. 45; Magnolia Glauca with very fragrant flowers do. 46; Snowy Medlar, or May Cherry, covered with White flowers in the spring do. 47; Purple flowering Acacia, with beautiful clusters of flowers do. 48; European mountain Ash, or Scotch Roan, with clusters of Scarlet fruit, which remain several months 50, 49; American Mountain Ash do. 50; Tooth Ache tree, or Thorny Ash 25, 51.

Ornamental Shrubs.

Dwarf white flowering Horse Chestnut 37½, 1; Double flowering Almond 25, 2; Southern Wood 12½, 3; Barberry for preserving 20, 4; Brown flowering Calicanthus do. 5; American Hazlenut, 61, 6; American Strawberry tree, or Burning Bush 25, 7; Snow Drop, or Silver Bell tree, with wreaths of beautiful pendant flowers 37½, 8; Single White Althea 24, 9; Single Red do. do. 10; Double Pur-

ple do. 25, 11; Double White do. do. 12; Variegated leaved do. do. 13; Changeable Hydrangia very showy and ornamental 50, 14; St. John's wort, with showy yellow flowers 25, 15; European small leaved Yellow Jasmine do. 16; Carolina large flowering Syringa do. 17; European fragrant do. do. 18; Trefoil tree, *Ptelia Trifoliata* do. 19; Yellow flowering Bladder Senna, with white seed vessels 25, 20; Red do. do. with Red do. do. 21; Spice wood or Wild Alpice do. 22; Rose Acacia much admired do. 23; English Variegated Willow, with leaves neatly mottled do. 24; Parsley leaved Elder do. 25; Ninebark *Spiraea*, do. 26; Three leaved Bladder Nut, with its seed vessels resembling bladders do. 27; Snowberry, with clusters of delicate snow white fruit in Autumn very beautiful 50, 28; White Lilac 25, 29; Purple do. 124, 30; Purple Persian do. do. 31; Snowball, or Guelder Rose 25, 32; Common Privet or Prim 124, 33; Sweet Fern do. 34; Lavender do. 35; Wormwood do. 36.

Evergreens—25 cents.

Common Box, for edging 124 cents per yard, or 64 each 1; Silver striped leaved do. 25 cents 2; American Holly do. 3; Swedish upright Juniper do. 4; Red American Cedar do. 5; White Cedar 374, 6; Broad leaved *Kalmia*, or Laurel 25, 7; Narrow leaved do. very delicate 124, 8; Evergreen 'Thorn, with Scarlet fruit during the Autumn, *Mespilus Pyracantha* 25, 9; Balm of Gilead, or Balsam Fir, much admired for its beautiful growth and foliage 50 to 100, 10; White or Weymouth Pine, much admired do. do. 11; Hemlock Spruce 50, 12; Black Spruce 50 to 100, 13; White Spruce 50, 14; Pitch, or Resin Pine 25, 15; Yellow Pine do. 16; Chinese Arbor Vitæ 50, 17; American do. do. 18.

Vines and Creepers.

Pipe Vine or Birthwort, with broad leaves and flowers, like a Dutchman's pipe 25, 1; Scarlet Trumpet Creeper do. 2; Staff Tree, or Climber do. 3; Blue flowering Virgin's Bower 124, 4; Travellers' Joy 25, 5; Evergreen Ivy do. 6; White flowering Jessamine do. 7; Multiflora Rose 374, 8; Sweet Briar 25, 9.

Honey Suckles.

Monthly Fragrant 25, 10; Early Sweet Italian do. 11; English Woodbine do. 12; Scarlet Monthly Trumpet do. 13; Variegated do. 14; Asparagus Roots, per hundred 50 cents—per thousand \$4.00.

Peaches.

Peach trees grow and succeed pretty well, in almost any dry soil, but that which they appear to delight in most is, a rich sandy loam: they grow well however, and even luxuriantly in some of our light and sandy land (N. J.) if constantly tilled, and helped with a moderate portion of manure; and the size and beauty, and especially the flavour of the fruit, is seldom, if ever, exceeded in any other situation; but to the successful cultivation of this delicious fruit, two very formidable evils have opposed themselves; the worm, which attacks them in the root and a disease called the Yellows; the latter made great devastation some years ago, in this state, Pennsylvania and New York; defeating the most skilful exertions to raise healthy productive peach orchards; but of late years, this malady, as well as the worm, seems to have abated its deleterious effects, they have been in great measure overcome, by the vigilance and good management of our farmers and cultivators. The practice now common among those who raise peaches for market, is to plant trees of one summer's growth from the bud, at the distance of from 15 to 20 feet asunder, and use the ground so occupied, for raising truck, that is to say, peas, beans, cucumbers and other vines, until the roots of the peach trees so occupy the ground, and the tops so shade the surface, as to answer the purpose of raising those vegetables no longer: they however continue to plough the

ground and keep it mellow, and their orchards generally produce several, say 3, 4 and in some instances, 5 prime crops of peaches; which is considered as paying well for the trouble and cost; but when a peach or nectarine tree, will no longer produce perfect fruit, whether it is declining under the contagion of the yellows, or the depredation of the worm, it is equally important that it should be immediately taken up, and root and branch consigned to the woodpile, for if suffered to remain, it will in the nature of things, become either the means of diffusing the poison of the disease, or a nursery for the insect, that in their turns may deposit their eggs and increase the new crops of the worm: I have not seen it answer any good purpose, to plant young peach trees on the site from which old ones have recently been removed: the ground should be first well manured, and time given for the roots of the old trees to rot, and the soil to recover what it had expended in the growth of the former crop, before it will be likely to satisfy the planter with a new orchard to his profit.

Cherries.

Cherry trees grow best in a rich loam, they will not thrive well in a low wet situation; and like the apple and pear, require while young, the ground to be cultivated and occasionally manured; the common morellos have become subject for some years past, to the attacks of an insect, that stings the branches and deposits its eggs, which soon hatching, prey upon the sap or tender bark, and occasions the growth of excrescences, which bring on decay, and in a few years destroy the tree. I have not heard of any experiment yet made, that seems likely to stop its depredations, and thereby prevent the loss of this choice and useful fruit; nor can I see any thing so likely to effect the purpose, as carefully to examine the trees several times during the summer season, and cut off all the twigs thus affected with the insect, and burn them; by this means the injury would be stopped, and the worms prevented from passing into a state, capable of spreading the mischief another year; the plumstone morello and the English morello, do not appear to be subject to the attack of this insect, and the fruit is large, late and finely flavoured.

Plums.

This fruit, from the naked, and while young, tender skin, is frequently much injured by a small bug called the Curculio, which perforates the skin of the fruit soon after its formation, and deposits its egg, and that in due time hatching, its product feeds upon the tender pulp, and at length occasions a very large proportion of its fruit to fall from the tree, before it arrives at maturity; it is a fact well established, that the fruit does not suffer so much in this way, where the ground is constantly trodden, as in walks and yards, especially in towns; in such situations very fine crops of large fair fruit are produced; I have been told by a very respectable friend, that by paving round a nectarine tree to the extent of its branches, he had obtained good crops of fair fruit from it several years; by the same means, I have no doubt plums and apricots might be made to ripen their fruit, where the ground is sufficiently rich; it is said of the Curculio, that it rises from the ground and does its mischievous work in the night, and with the rising sun retires and secretes itself again in the earth; it is furnished with small wings, which enable it to make short flights, but seldom to go far at a time; the hard surface by treading, or paving, prevents its finding shelter under the branches of the tree, and consequently it has to seek elsewhere for a hiding place; thus very probably, the number of assailants are much lessened; but there is another point, at which these mischievous depredators might be attacked, that would probably do much in securing good crops of plums, &c. in almost any situation where the trees will grow freely, the fruit drops

from the tree with the worm of the Curculio in it, upon which it feeds until it attains a state of maturity capable of taking shelter in the earth, where it remains in some form or other until the warmth of spring brings it forth a Curculio, and by the time the fruit begins to form, it is prepared to begin the work of its ancestor; if then the imperfect fruit as fast as it falls were picked up and destroyed, can there be any doubt that the number would be soon much reduced, and our crops of plums, &c. be more fair and plentiful; plum trees in some places, have been attacked in the branches in the same manner as the morello cherry trees, probably by the same insect, but not to the same extent; the treatment recommended in the one case would be likely to prevent the injury in a great degree in the other.

Asparagus.

The soil best calculated for the growth of this excellent vegetable, appears to be a light sandy loam, which should previously be made rich and mellow, eighteen or twenty inches deep: the ground thus prepared, trenches are to be dug twelve inches wide, and the same depth with a space of two feet between, upon which the earth from the trenches should be placed: thus prepared, the plants should be placed in the trench one foot apart, one on one side of the trench, and the next on the other alternately throughout, with their faces to the bank, and the roots spread lengthwise of the trench, and covered to the depth of two or three inches, with earth from the sides of the bank; in which situation the bed may remain the first summer, excepting that in the operations of hoeing necessary to keep down the weeds, a portion of the earth may be drawn into the trenches so as gradually to fill them up to a level with the surface; the ensuing spring, the ground should be dug up, and covered lightly with coarse hay, in order to keep it cool and prevent the growth of weeds; the following spring, the litter should be carefully raked off, the ground dug or ploughed, and covered again with hay; it will do to cut for use the third spring, but when the season for cutting is over, I would recommend the covering with hay to be repeated, and so again every succeeding year.

RURAL ECONOMY.

BOILING MILK.

MR. SKINNER,

March 21, 1826.

Sir,—Perhaps it is not so generally known as it ought to be, that the boiling of milk before it is set away for the cream to rise, will completely divest it, and of course the butter made therefrom, of the very unpleasant flavor arising from the cows having fed upon garlicky pastures—the boiling ought to be continued for at least half an hour—this dairy secret, if it be one, I have learned from a female friend, who has been in the habit of availing herself of it for some years past.

Yours, truly,

EDWARD TILGHMAN.

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

(Continued from p. 8.)

A WHISPER TO THE WIFE.

"If possible, let your husband suppose you think him a good husband, and it will be a strong stimulus to his being so. As long as he thinks he possesses the character, he will take some pains to deserve it: but when he has once lost the name, he will be very apt to abandon the reality altogether." I remember at one time being acquainted with a lady who was married to a very worthy man. Attentive to all her comforts and wishes, he was just

what the world calls a very good husband; and yet his manner to his wife was cold and comfortless, and he was constantly giving her *heart*, though never her *reason*, cause to complain of him. But she was a woman of excellent sense, and never upbraided him. On the contrary, he had every cause for supposing she thought him the best husband in the world; and the consequence was, that instead of the jarring and discord which would have been inevitably produced had she been in the habit of finding fault with him; their lives passed on in uninterrupted peace.

I know not any attraction which renders a woman at all times so agreeable to her husband, as cheerfulness or good-humour. It possesses the powers ascribed to magic: it gives charms where charms are not; and imparts beauty to the plainest face. Men are naturally more thoughtful and more difficult to amuse and please than women. Full of cares and business, what a relaxation to a man is the cheerful countenance and pleasant voice of the gentle mistress of his home! On the contrary, a gloomy, dissatisfied manner is an antidote to affection; and though a man may not seem to notice it, it is chilling and repulsive to his feelings, and he will be very apt to seek elsewhere for those smiles and that cheerfulness which he finds not in his own house.

In the article of dress, study your husband's taste, and endeavour to wear what he thinks becomes you best. The opinion of others on this subject is of very little consequence, if he approves.

Make yourself as useful to him as you can, and let him see you employed as much of your time as possible in *economical* avocations.

At dinner, endeavour to have his favourite dish dressed and served up in the manner he likes best. In observing such trifles as these, believe me, gentle lady, you study your own comfort just as much as his.

Perhaps your husband may occasionally bring home an unexpected guest to dinner. This is not at all times convenient. But beware, gentle lady, beware of frowns. Your fare at dinner may be scanty, but make up for the deficiency by smiles and good humour. It is an old remark, "cheerfulness in the *host* is always the surest and most agreeable mode of welcome to the guest." Perhaps, too, unseasonable visitors may intrude, or some one not particularly welcome may come to spend a few days with you. Trifling as these circumstances may be, they require a command of feeling and temper: but remember, as you journey on, inclination must be continually sacrificed; and recollect also, that the *true* spirit of hospitality lies, (as an old writer remarks,) not in giving great dinners and sumptuous entertainments, but in receiving with kindness and cheerfulness those who *come* to you, and those who *want* your assistance.

Endeavour to feel pleased with your husband's bachelor friends. It always vexes and disappoints a man when his wife finds fault with his favourites—the favourites and companions of his youth, and probably those to whom he is bound not only by the ties of friendship, but by the cords of gratitude.

Encourage in your husband a desire for reading out at night. When the window curtains are drawn, the candles lighted, and you are all seated after tea, round the fire, how can his time be better employed? You have your work to occupy you: he has nothing to do but to sit and to think; and perhaps to think too that this family scene is extremely stupid. Give interest to the monotonous hour, by placing in his hand some entertaining but useful work. The pleasure which you derive from it will encourage him to proceed; while remarks on the pages will afford improving and animating topics for conversation.

Is he fond of music? When an appropriate moment occurs, sit down with cheerfulness to your

piano or harp; recollect the airs that are wont to please him most, and indulge him by playing those favourite tunes. Tell me, gentle lady, when was your time at this accomplishment so well devoted? While he was your *lover*, with what readiness, and in your very best manner, would you touch the chords; and on every occasion what pains did you take to captivate! And now that he is become your *husband*, (methinks at this moment I see a blush mantling in your cheek,) now that he is your husband, has pleasing him become a matter of indifference to you?

Particularly shun what the world calls in ridicule, "Curtain lectures." When you both enter your room at night, and shut your door, endeavour to shut out at the same moment all discord and contention, and look on your chamber as a retreat from the vexations of the world, a shelter sacred to peace and affection.

I cannot say I much approve of man and wife at all times opening each other's letters. There is more, I think, of vulgar familiarity in this than of delicacy or confidence. Besides a sealed letter is sacred; and every one likes to have the first reading of their own letters.

Perhaps your husband may be fond of absenting himself from home, and giving to others that society which you have a right to expect: clubs, taverns, &c. &c. may be his favourite resort. In this case, it may perhaps be necessary to have recourse to mild reasoning;—but never—I again repeat—never to clamorous dispute. And the fonder he seems of quitting his home, the greater should be your effort to make yourself and your fireside agreeable to him. This may appear a difficult task; but I recommend nothing that I have not myself seen successfully practised. I once knew a lady who particularly studied her husband's character and disposition; and I have seen her, when he appeared sullen, fretful, and inclined to go out, invite a friend, or perhaps a few friends, to spend the evening, prepare for him at dinner the dish she knew he liked best, and thus, by her kind, cheerful manner, make him forget the peevishness which had taken possession of him. Believe it from me, and let it take deep root, gentle lady, in your mind, that a good-humoured deportment, a comfortable fireside, and a smiling countenance, will do more towards keeping your husband at home than a week's logic on the subject.

Is he fond of fishing, fowling, &c.? When those amusements do not interfere with business or matters of consequence, what harm can result from them? Strive then to enter into his feelings with regard to the pleasure which they seem to afford him, and endeavour to feel interested in his harmless accounts and chat respecting them. Let his favourite dog be your favourite also; and do not with a surly look as I have seen some wives put on, say in his hearing, "That Cato, or Rover, or Ranger, is the most troublesome dog and the greatest pest in the world."

If the day he goes out on these rural expeditions be cold or wet, do not omit having his shirt and stockings aired for him at the fireside. Such little attentions never fail to please; and it is well worth your while to obtain good-humour by such easy efforts.

Should he be obliged to go to some distant place or foreign land, at once and without indecision, if circumstances render it at all practicable, let your determination be made in the beautiful and expressive language of Scripture: "Entreat me not to leave thee, nor to return from following after thee: for whither thou goest, I will go; and where thou lodgest, I will lodge: thy people shall be my people, and thy God my God. Where thou diest will I die, and there will I be buried; the Lord do so to me, and more also, if aught but death part thee and me." (*Ruth* i. 16, 17.) If his lot be com-

fortless, why not lessen those discomforts by your society? and if pleasure and gaiety await him, why leave him exposed to the temptations which pleasure and gaiety produce? A woman never appears in so respectable a light, never to so much advantage, as when under the protection of her husband.

Even occasional separations between man and wife I am no friend to, when they can be avoided. It is not to your advantage, believe me, gentle lady, to let him see how well he can do without you. You may probably say, "Absence is at times unavoidable." Granted: I only contend such intervals of absence should be short, and occur as seldom as possible.

Perhaps it may be your luckless lot to be united to an unkind husband—a man who cares not whether he pleases or displeases, whether you are happy or unhappy. If this be the case, hard is your fate, gentle lady, very hard! But the die is cast; and you must carefully remember that no neglect of duty on his part can give a legitimate sanction to a failure of duty on yours. The sacredness of those ties which bind you as a wife remain equally strong and heavy whatever be the conduct of your husband; and galling as the chain may be, you must only endeavour for resignation to bear it, till the Almighty, by lightening it, pleases to crown your gentleness and efforts with success.

When at the Throne of Grace, (I address you as a religious woman,) be fervent and persevering in your prayers for your husband; and by your example endeavour to allure him to that heaven towards which you are yourself aspiring: that, if your husband *obey not the word*, as the sacred writer says, *he may, without the word*, be won by the conversation (or conduct) of the wife.

Your husband perhaps may be addicted to gambling, horse-racing, drinking, &c. These are serious circumstances; and mild remonstrance must be occasionally used to oppose them; but do not let your argument rise to loud or clamorous disputing. Manage your opponent like a skilful general, and constantly watching the appropriate moment for retreat. "To convince without irritating," is one of the most difficult as well as most desirable points of argument. Perhaps this may not be in your power: at all events, make the attempt; first praying to God for direction, and then leaving to him the result.

Or, gentle lady, you may perhaps be united to a man of a most uncongenial mind, who, though a very good sort of husband, differs from you in every sentiment. What of this? You must only make the best of it. Look around. Numbers have the same, and infinitely worse complaints to make; and, truly, when we consider what real misery there is in the world, it seems the height of folly fastidiously and foolishly to refine away our happiness, by allowing such worthless trifles to interfere with our comfort.

There are very few husbands so bad as to be destitute of good qualities, and probably very decided ones. Let the wife search out and accustom herself to dwell on those good qualities, and let her treat *her own* errors, not *her husband's*, with severity. I have seldom known a dispute between man and wife in which faults on *both sides* were not conspicuous: and really it is no wonder; for we are so quick sighted to the imperfections of others, so blind and lenient to our own, that in cases of discord and contention, we throw all the blame on the opposite party, and never think of accusing ourselves. In general, at least, this is the case.

I was lately acquainted with a lady, whose manner to her husband often attracted my admiration. Without appearing to do so, she would contrive to lead to those subjects in which he appeared to most advantage. Whenever he spoke, she seemed to listen as if what he was saying was worth attending to. And if at any time she differed from him in opinion, it was done so gently as scarcely to be perceived even by himself. She was quite as well in-

formed (perhaps more so) and as sensible as himself, and yet she always appeared to think him superior in every point. On all occasions she would refer to him, asking his opinion, and appearing to receive information at the very moment perhaps she was herself imparting it. The consequence was, there never was a happier couple, and I am certain he thought her the most superior woman in the world.

I repeat, it is amazing how trifles—the most insignificant trifles—even a word, even a look—yes, truly, a look, a glance—completely possess the power, at times, of either pleasing or displeasing. Let this sink deep in your mind: remember, that to endeavour to keep your husband in constant good-humour is one of the first duties of a wife.

(To be continued.)

SPORTING OLIO.



PEDIGREE AND PERFORMANCES OF ECLIPSE.

This celebrated racer was bred by His Royal Highness the Duke of Cumberland. Marske was sire of him, which horse was also His Royal Highness's property. Marske was a son of Lord Patmore's Squirt, and Squirt of Bartlett's Childers; Mr. Robinson's Snake mare was the dam of Marske; her dam Grey Wilkes, sister to Clumsy. Spiletta (the dam of Eclipse) was got by Lord Chatsworth's Regulus. The Godolphin Arabian was sire of Regulus. Spiletta's dam (Mother Western) was got by Smith's Son of Snake. Sir Robert Eden bred Spiletta, and His Royal Highness the Duke of Cumberland purchased her of Sir Robert, and, in 1764, (the year in which happened the most remarkable eclipse of the sun on record, and, indeed, he was foaled the day on which it occurred, viz. the 1st of April,) Spiletta dropped a horse-foal, which, at one year old, was cast, with others of his Royal Highness's stud, and sold to that celebrated sportsman, Mr. Wildman, a Smithfield salesman, at a low price, who gave him the name of Eclipse, from the circumstance of his birth happening as aforesaid.

Various sums have been mentioned as the price paid by Mr. Wildman for the colt, some quoting it at 20 guineas, whilst one lately mentions 75 guineas; but the most authentic, i. e. that derived from the most veracious authority, is, that he was bought for 45, or guineas.

Eclipse was brought up in the neighbourhood of Epsom, in a hardy manner, i. e. not pampered so much as thorough-bred horses generally are, and is thereby supposed to have contracted an affection of the chest, his lungs being the first of the vital functions which gave way in his old age, if the defect were not occasionally perceptible before.

The principal cause of his being sold was that of having the appearance of a very ordinary colt, but possessing those corresponding points which constitute the inimitably good racer; an *agrement* in conformation which ordinary judges could not discover, as proved by the foregoing comparison.

At a proper age Eclipse was put into training; and in his trials proved, to the satisfaction of his owner, he was superior to any of his predecessors. Being a very bony and muscular horse, Mr. Wildman, (who was as good a judge as ever existed,) on Wednesday, May 3, 1769, started him for the Noblemen's and Gentlemen's Plate of 150, at Epsom, for horses that never won 130, matches excepted; weight for age; four mile heats. He was now five

years old,* when he beat Mr. Fortescue's Gower, 5 years old; Mr. Castle's Chance, six years old; Mr. Jennings's Social, do.; and Mr. Quick's Plume, do.; all of which were distanced the second heat. Betting, at starting, 4 to 1 on Eclipse. He was rode by John Whiting; and the heat was decided in the order here set down. When the horses were about to start for the second heat, captain O'Kelly, who had witnessed the powers of Eclipse, that he would not be "pulled," and that the jockey meant to let him go, betted that he would undertake to "place the horses." Done and done being done, he declared "Eclipse first, the rest no where;" and they were all distanced!

2. At Ascot-Heath, May 29, same year, a Plate of 150; 4 years old 9st 5 lb.; 5 years old 9st 3 lb.; two mile heats; when Mr. Wildman's Eclipse beat Mr. Fettyplace's Crème de Barbe, both 5 years old, at two heats, easy.

3. At Winchester, June 13, same year, "the King's 100 gs. for 6 years old horses, &c. 12st; four mile heats." Here Eclipse beat Mr. Turner's Slouch, the Duke of Grafton's Chigger, Mr. Gott's Juba, Mr. O'Kelly's Caliban, and Mr. Bailey's Clanvil, at two heats. Betting 5 to 4 against Eclipse, he then being only 5 years old, all his competitors one year older. Horses for his Majesty's Plates, of whatever age, then carried 12st.

4. Two days thereafter he walked over the course for the 150 purse, at the same place.

5. At Winchester, June 15, same year, he walked over the course for 150, four mile heats, not any daring enough to start against him. The above are his performances the first year of running.

6. At Salisbury, June 28, "the King's 100 gs." was run for by 6 year olds; weight, 12st.; and won by Mr. Wildman's ch. h. Eclipse, 5 years old, walking over the course. [Annals of Sporting.

(To be continued.)

DISTEMPER IN DOGS.

Williamsburg, March 23, 1826.

DEAR SIR,—I observe in your last number of the Farmer, that information is wanted on the cause and cure of the distemper in dogs; I know nothing of the cause; I have a dog that I have cured, he had the distemper very bad. I send you below, the mode I practised with him. If you think it worth publishing you are at liberty to do so.

First give in some gravy, nine grains of Ipecacuanha, in three days after give three grains of calomel and five of jalap, in three days after repeat this dose, and in ten days repeat the dose of calomel and jalap.

Respectfully, yours,

RICHARD COKE.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 31, 1826.

[Extract of a letter from Gen. LAFAYETTE to J. S. Skinner, Editor of the American Farmer, at Baltimore:]

"La Grange, Jan. 20, 1826.

"It is not an easy task for me to submit to the wide material separation which now exists between me and my American friends while my mind is constantly with them; and the regret for the loss of their society, mingles with an ardent sympathy in

* An age at which horses may be said to arrive at perfection of speed, if not of strength or lastingness; the practice of running yearling, 2, and 3 years old being injurious to the animals' future powers, both as to running and procreation, and therefore extremely impolitic in a national point of view, however profitable or amusing to the impatient vanity of the persons concerned.

their publick and personal concerns. So prompt I have been in recovering pleasing habits, and so much attached I feel to my new as well as my old connexions in the United States, that it seems to me quite strange to think this winter will pass without meeting any of you, either at Baltimore or Washington. I am eagerly waiting for the papers and letters from my friends, and beg when you write to remember that at a distance minute particulars are very welcome.

The affectionate reception I have met from the people on my journey and on my arrival to this part of the country, and the family and friendly enjoyments that awaited me, have been sadly troubled by the illness of one of my grand-daughters, who, contrary to all expectation, is happily recovered. I have passed, hitherto, most of my time at La Grange; but am now going for two or three months to town, saving some excursions to my farm. I must give you an account of the stock you so very kindly assisted in forwarding and increasing. One of Mr. Patterson's Coke Devons, the elder bull, died on the passage; the three others have recovered from the fatigue and are now in fine order.* The giant wild turkey we have admired together, died also at sea; his brother, and another from General Cocke, of Virginia, arrived safe; two small Virginia hens never could retrieve the injuries of the sea, but the males are very hearty. Your two hogs have well supported the voyage, and are better shaped than any I have seen, although I have chanced to obtain the best of an importation from England. The Virginia plough you have been pleased to forward, has been presented for examination to the Central Society at Paris. I expect their report. I am anxiously looking for the arrival of two models kindly promised; the one a steam machine, after that of Mr. Robert Smith—the other a threshing machine; this is sent by Gov. Sprigg, the steam one by Mr. Morris.†

Should they be ready to reach New York by the first April, capt. Macey who sails on the 5th, and comes himself to Paris, will take charge of them. Permit me to entreat your kindness for two other articles; I much wish to introduce at La Grange, the pretty American partridge, so called in the south, and quail, in the north, and the terrapin, about whose management I would need an instruction.—Capt. Macey would take care of them, and if the kind friend, Joseph Townsend, who had found the mammoth Turkey, persist in his good intention to send some more, or you could get some of the tame breed, second or third generation, at the good Postmasters at York, Pa. capt. Macey might be entrusted with them.

I have on my farm a fine shepherd's dog, and can find a proper slut for him; but the more I inquire and see about those dogs, so very sagacious and useful here, the more I find that their principal merit is lost when they have not to execute the orders of a shepherd in the marshalling of a flock.

No letter from you, my dear sir; no number of the American Farmer has been received, although I hoped it might come by the last packet. Charles Lasteyrie, went to Italy immediately after my arrival; he is daily expected in Paris.

Although I had more to say of Agricultural concerns than European politics, nauseous as their diplomacy, cannot fail to be to our American taste; I will tell you in a few words."

* These were of the pure blood, all generously presented by Wm. Patterson, Esq. to the old "American veteran."

† Instead of a model, Mr. J. B. Morris sent him a complete and very elegant steam apparatus, for teaming food for 50 head of stock, with every thing prepared for immediate use. It must have cost several hundred dollars.

MARYLAND AGRICULTURAL SOCIETY.

At a special meeting of the Board, held at Gen. Ridgley's, on Wednesday, 1st February—present, C. Ridgley, of H.—chairman.

R. Caton, J. B. Morris, D. Williamson, Jr. J. Hollingsworth, J. Carroll, Jr. N. Bosley—trustees.

A memorial to the Legislature, praying a grant of money in aid of the funds of the Society, signed by the chairman and secretary of the Board of Trustees, on the Eastern Shore, accompanied by a letter from Mr. Hammond (chairman,) urging the Board of the Western Shore to join in its support, was submitted and read—when on motion, it was resolved, that this Board accord with the Trustees of the Eastern Shore in the sentiments of their memorial to the Legislature of Maryland, and will unite with them in its support, and that the chairman and secretary of the trustees, be authorised to sign the same in behalf of this Board, and cause the same to be forwarded forthwith to the chairman of the Agricultural Committee, in the House of Delegates.

At a regular meeting of the Board, held on Thursday, 23d March, at Eutaw, at B. W. Hall's, Esq's.—present, B. W. Hall, chairman, pro tem. J. Carroll, Jr., D. Williamson, Jr., trustees, J. Howard, secretary.

On motion resolved, that the president, treasurer, secretaries and trustees, do forthwith commence their collections, and that each of them be required to pay to the treasurer, at least the sum of \$20, at or before the next meeting of the trustees, and that the secretary be required to communicate this resolution to each of the above gentlemen.

Resolved, that B. W. Hall, J. B. Morris, and James Cox, be appointed to procure the plate necessary for the next exhibition.

Resolved, that Jacob Hollingsworth, James Carroll, Jr. and D. Williamson, Jr. be appointed to prepare a list of Judges for the next cattle show, and that they report the same to the next meeting of the trustees.

Adjourned to meet at the residence of Jacob Hollingsworth, on Elk Ridge, on Thursday, the 13th April.

YUCCA GLORIOSA.—A specimen of this curious plant is now in full bloom in a garden near Worcester; it has about 700 beautiful blossoms.

THE GRAPE.—No effort made in the U. States to raise or improve the grape, has been more successful than that of Thomas McCall, Esq. of Laurens county. His wine from the native grape is superior to any the writer of this article ever drank, excepting the very first quality of foreign wine, which could with any propriety be brought into comparison with it.—Milledgeville, Pa.

[We have received a bottle of Mr. McCall's wine; the quality is indeed, excellent, and proves that the process of wine making is well understood by him. But what we value far more is, an essay by the same gentleman, on the culture of the vine and the manufacture of wine; which we shall carefully preserve until the first opportunity presents of spreading it before the numerous readers of this journal—in which more has already been published to encourage the growth of that fruit and the manufacture of its products.]

100 lbs. 8 cts. — 18 lbs. — 1 cts. —
Butter, 1 lb. — 18 cts. — 1 cts. —
Potatoes, 100 lbs. — 18 cts. — 1 cts. —
100 lbs. — 18 cts. — 1 cts. —

SINCLAIR & MOORE,

Have just received their spring importation of Garden and Field Seeds, in fine order, from London, per ship Belvidera—among which are Cabbage seeds assorted; Rutabaga and other kinds of Turnip seeds; short-topped Scarlet, and a general assortment of Radish seeds; Peas, assorted; Broad Windsor; Green Genoa, and Early Mazagan Beans; Cucumber; Egg Plant; Lettuce, Endive, and Flower seeds, assorted, &c. &c.

Field Seeds.—Luzerne, Sainfoin, Perennial Ray Grass, Fox-tail, White Clover, Spring and Winter Tares.

In Store.—Orchard and Herds' Grass, Sapling and common Clover, Spring Barley, and Cotton Seed, recommended as sown to Virginia and Maryland, by F. H. Smith, Eastern Shore of Virginia.

Fruit Trees.—Among which are Peach and Pear trees of the late importation from France to New York.

Also, a general assortment of Implements of Husbandry.

P. S. Catalogues of trees and garden seeds will be furnished gratis. ad mo. 31.

SAXONY MERINO, AND MERINO RAMS.

The subscriber, will offer at public sale, in the village of Holmesburg, ten miles from Philadelphia, on the New York turnpike, on the 1st May next, his surplus Stock of Saxony Merino, and Merino Rams—consisting of 48 of the former, of one and two years old, being the produce of his imported Saxony rams and his original Merino stock, inferior to none in the United States; and 22 of the latter, of three to five years—all superior, woolled she p. Also, a few Ewes with lambs.

Sale to commence at 11 o'clock.

WM. J. MILLER.

DAVIS' IMPROVED PLOUGHS.

The subscriber, would inform the public that he has now on hand, an assortment of GIDEON DAVIS' IMPROVED PLOUGHS, which he will warrant to be equal to if not surpass any other plough in use for making good work, for easy draft, and cheap repairs—I he following sizes are on hand, to wit:

12 inch Barshare with and without coulters, a large three horse plough.

10 inch Barshare with and without coulters, a small three or a large two horse plough.

10 inch cast shares with and without coulters, a large two horse plough.

9 inch cast or wrought top shares, with and without coulters, a large one horse plough, or for two ponies.

8 inch Barshares and cast shares with and without coulters, a one horse plough, sometimes used with two small ponies or mules.

Will have, in a few weeks, 9 inch with Barshares for rocky ground—Also, in a few weeks, in season for cultivating tobacco, 7 inch ploughs, which size is much admired for that use, and for seeding grain.

Also, on hand, Ryland Rodes' much admired Hillside Plough, and is likewise agent for the said Rodes.

Likewise Cultivators on an improved plan, and a very superior Corn Sheller.

His Cylindrical Straw Cutters and Brown's Vertical Spinner for spinning wool, &c. kept on hand ready to order as usual.

Also made to order, Gideon Davis' substratum Plough, and his various kinds of Shovel Ploughs, the latter much valued at the south for cultivating Cotton, particularly the oval and square Shovels.

All orders or communications by mail (post paid) will be punctually attended to.

JONATHAN S. EASTMAN,

No. 36 Pratt street, between Hanover and Charles street, Baltimore.

CONTENTS OF THIS NUMBER.

Scientific Memoranda, applicable to rural economy, continued—Observations on the means of preventing and relieving the accidents and diseases, to which farmers are particularly subject. By Jas. Mease, M. D.—White Flint Wheat—Cotton Presses—Catalogue of Danl. Smith's Fruit and Ornamental Trees and Plants concluded—On Boiling Milk—Whisper to a Newly-married Pair continued—Pedigree and performances of Eclipse—Cure for Distemper in Dogs—Extract of a Letter from General Lafayette to the Editor—Proceedings of Trustees of Maryland Agricultural Society for the year ending 1895.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8			
BACON, and Hams, . .	lb.	7	8 8	12	
BEEF-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java,	—	16	17	22	25
Havana,	—	15	17	18	20
COTTON, Louisiana, &c.	—	15	17		
Georgia Upland, . . .	—	13	15 1/2		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12		14	16
Dipt,	—	10			12 1/2
CHEESE,	—	7	10	12	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 50			
Shad, trimmed, . . .	—	6		8	
FLAXSEED, Rough, . .	bush	75		87 1/2	
FLOUR, Superfine, city,	bbl.	4 00	4 25	5 00	5 50
Fine,	—	4		4 25	
Susquehanna, superfi.	—	4			
FLAX,	lb.	9	11		
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	68	70		
Wheat, Family Flour, .	—	80	85		
do. Lawler,	—	65	70		
do. Red,	—	78	80		
do. White Flint, . . .	—	2 00			
Rye,	—	65	70		
Barley,	—	90	95		
Clover Seed, Red . . .	bush	3 75	4 00	4 50	
Ruta Baga Seed, . . .	lb.	1		2 00	
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	2 25		2 50	
Oats,	—	45		50	
Beans, White,	—	1 50		1 75	
HEMP, Russia, clean, .	ton	215	220		
Do. Country,	—	120	130		
HOPS,	lb.	25		37	
HOGS' LARD,	—	8	8 1/2		
LEATHER, Seal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45		62	75
Havana, 1st qual. . . .	—	25	26 1/2	37 1/2	
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6x20d.	lb.	6 1/2		9	
NAVAL STORES, Tar, . .	bbl.	1 27	1 50		
Pitch,	—	2			
Turpentine, Soft, . . .	—	1 75	2 00		
OIL, Whale, common, .	gal.	30		40	50
Spermace, winter . . .	—	69	70	88	1 00
PORK, Baltimore Mess,	bbl.	11 00	12 50		
do. Prime,	—	9 00			
PLASTER, cargo price,	ton.	4 50			
RICE, fresh,	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, . .	—	5 1/2	7	8	12
WHISKEY, 1st proof, . .	gal.	25 1/2	27	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	36	37	50	
SUGARS, Havana White,	c. lb.	13 50		15	16
do. Brown,	—	9 50	10		
Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	23
Lump,	—	16	18	20	
SPICES, Cloves,	—	70		1 00	
Ginger, Ground,	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes,	bush	46	48		
Liverpool Blown . . .	—	53	55	75	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 20	1 30	2 00	
Lisbon,	—	1 15	1 25	1 50	1 77
Claret,	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full b'd	lb.	35	40		
do. crossed,	—	28	30		
Common, Country, . .	—	25			
Skinnors' or Pulled, .	—	33	35		

Printed every Friday, at \$5 per annum, for JOHN S. KINER, Editor, by JOHN D. TOY, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

SCIENTIFIC MEMORANDA—APPLICABLE TO RURAL ECONOMY.

(Continued from p. 10.)

Sap of Plants.

Plants receive their nourishment by absorption of their roots, and inhalation of their leaves. The atmosphere abounds with food for vegetables, and by the laws of chemical affinity, each plant attracts and retains from this great store-house of nature, such qualities, and in such proportions, as are necessary, with the aid of the absorbent vessels of the root, to develop and mature the properties which respectively characterize species and varieties.—Thus, the pepper, the peach, the onion, and the melon, growing in the same soil, and inhaling the same atmosphere, are endowed by the wonderful economy of nature, with the singular property of assimilating their peculiar food. It is ascertained, that the elements of all vegetables are very similar, and few in number; and that those most essential are carbon, (charcoal,) oxygen, (a constituent of the atmosphere and of water,) and hydrogen, (the other constituent of water. Nitrogen (another constituent of the atmosphere,) exists in some plants. It is found in the gluten of wheat, and in all animals. It is the different combination of these elements, and of some few others in minute proportions, that make up all the varieties in the vegetable kingdom. To return to our subject. The vegetable and animal matter in the soil, decomposed or dissolved, and held in solution by water, is absorbed by the roots, where it immediately undergoes a partial elaboration, or change, as may be demonstrated, in winter or spring, by the sap of the maple, walnut and birch, which differ essentially from the moisture of the soil. In this state it is called *sap*. Many plants inhale food through the epidermis and bark of the trunk, particularly annuals.

The sap is received at the root into longitudinal vessels, which convey it to the alburnum, or what is termed sap wood, between the heart and the bark, through which it passes to the leaves, flowers and fruit. It here undergoes a further elaboration. Moisture, and matter analogous to the excrement of animals, is thrown off by transpiration or perspiration; and carbonic acid gas and oxygen abstracted from the atmosphere. Its colour and consistence are changed. The transpiration of the leaves of plants has been particularly illustrated by the experiments of Dr. Stales, who found that a sunflower, three and a half feet high, transpired in twelve hours, one pound fourteen ounces. The same philosopher also ascertained that the force of the ascending sap in a vine, which he subjected to experiment, was equivalent to a column of water of more than forty-three feet. This theory of the ascent of the sap has been well demonstrated by Knight. He prepared some annual shoots of the apple and horse chestnut, by means of circular incisions, so as to leave detached rings of bark with insulated leaves remaining on the stem. He then placed them in coloured infusions obtained by macerating the skins of very black grapes in water; and, on observing the transverse section at the end of the experiment, it was found that the infusion had ascended by the wood beyond his incisions, and also into the insulated leaves, but had not coloured the pith nor bark, nor the sap between the bark and wood. His next object was to trace the vessels by which it is conveyed into the leaf. The apple and horse chestnut were still his subjects of experiment. In the former, the leaves are attached to the plant by three strong fibres, or rather bundles of tubes; one in the middle of the leaf stock, and

one on each side. In the latter, they are attached by means of several such bundles. Now the coloured fluid was found in each case to have passed through the centre of the several bundles, and through the centre only, tinging the tubes almost the whole length of the leaf-stock. In tracing their direction from the leaf-stock upwards, they were found to extend to the extremity of the leaves; and in tracing their direction from the leaf-stock downwards, they were found to penetrate the bark and alburnum, the tubes of which they join, descending obliquely till they reach the pith, which they surround. The experiment was now transferred to the flower-stalk, and fruit-stalk, which was done by placing branches of the apple, pear and vine, furnished with flowers not yet expanded, in a decoction of logwood. The central vessels were rendered apparent as in the leaf-stock. When the fruit of the two former was completely formed, the experiment was made upon the fruit-stalk, in which the central vessels were detected as before; but the colouring matter was found to have penetrated into the fruit also, diverging round the core, approaching again in the eye of the fruit, and terminating at last in the stamens.

When the sap has reached the leaves, and undergone the change we have noticed, it is called the *proper juice*, or *cambium*. It then descends through the bark, or chiefly between the bark and alburnum, to the extremity of the roots. This was regarded by Malpighi, as being to the plant what the blood is to the animal body—the immediate principle of nourishment, and grand support of life. In its passage down, it forms the annual circle of sap wood, and the growth of the tree is in proportion to its supply. It is the *cambium* which insinuates between the bark and wood, and causes them to separate freely. It is to this that the bud, in the process of inoculating, unites, and the removal of which renders the operation fruitless. It is this which, if the bark is peeled from an apple tree in midsummer, protects the trunk, and is converted into a new cortical layer. It is this which is seen to project from the edges of a wound, or partial decortication, in the form of wood and bark. By taking a ring of bark from the branch of a tree, or drawing a wire tight round it, which are often done to induce a disposition to bear fruit, it will be found, that the growth will be increased above, but will be little or nothing below the ligature, in consequence of the *proper juice* being stopped in its descent; and if the branch is divested of its leaves, it will die, because the leaves are necessary to elaborate or prepare the food. In autumn, nature forms a reservoir of sap, or vegetable blood, (says Knight,) in the alburnum of deciduous trees, as it evidently does in the bulb of the hyacinth and onion, and in the tuber of the potato; which sap it employs in the production of the leaves and blossoms of the succeeding season.

The cause of the ascent of sap is still a matter of dispute among philologists. Grew ascribes it to its volatile nature and magnetic tendency. Malpighi to the contraction and dilation of the air contained in the air vessels. Duhamel to the agency of heat. Saussure to a species of irritability inherent in the sap vessels, and dependant upon vegetable life. And Knight to the contraction and dilation of the silver grain, assisted by heat and humidity expanding or condensing the fluids. The cause of the descent of the proper juice, is equally undecided. The greatest stress is laid upon gravitation. But this is pretended to be disproved by the example of the weeping willow, &c.

AGRICULTURAL CHEMISTRY.

The want of a due appreciation of chemistry in agriculture is not to be wondered at, when it is considered that its application to this branch of in-

dustry is of but recent origin. In so little estimation was chemistry held in Evelyn's time, that he ranks it with astrology, and considers it synonymous with alchemy (*Terra*, p. 4.) The first attempt to treat of soils chemically, was made by Kirwan about 1780, the next by Lord Dundonald, in 1795, and then followed Dr. Darwin's *Philologia* in 1800, and lastly, Sir H. Davy's lectures on agricultural chemistry in 1802. *London*, p. 265. The term chemistry, is repulsive to the ears of most farmers, who consider its principles above their comprehension, and foreign to their business. The reverse of this is the case.—Its principles are interwoven with every operation of the farm, and a knowledge of many of its useful elements in husbandry may be acquired by an intelligent man in the leisure hours which he can command. We scout the empiric or quack, who, without a scientific knowledge of the human system, and of materia medica, endangers life by the almost indiscriminate prescription of one or two specific potions. The processes of husbandry are as much influenced by fixed laws, as those of the healing art. Chemistry teaches these laws. It enables us to manage our operations with a degree of certainty and profit unattainable by the mere labour. And as science is best learned when combined with practice, the farmer, above all others, has the advantage of applying and illustrating its usefulness in his daily labours. Within the last forty years, chemistry has imparted incalculable advantages to the manufacturing arts of Europe. It has probably benefitted them, in the economy of labour and materials, and the perfection of their products, more than fifty per cent. It will be no less useful to agriculture. But, as before observed, agricultural chemistry, is in its dawn. There is no country better adapted for its nurture than the United States; none better fitted to develop its attainments and usefulness. But the old are *too old to learn*. All we can hope is, that, appreciating its benefits, provision will be made for rendering our sons, in this branch of knowledge, wiser than their fathers. In 1791, a civil engineer could not be procured in the United States, to superintend the canals of New York. New York has since established a practical school; and now furnishes civil engineers to most of her sister states. Let her establish a school for teaching the science and practice of husbandry, and she shall, like charity, be twice blessed—in the giver and receiver—in the foresight and liberality of her councils, and in the intelligence and usefulness of her rising generation.

Flux of vegetable juices.

May be occasioned by a superabundance of sap, bursting spontaneously, or issuing from wounds; sometimes it is injurious to the health of the plant, and sometimes not. Sometimes the alburnum is split by the expansion of the frozen sap. But a cleft thus degenerated often degenerates into a chilblain, that discharges a blackish and acrid fluid to the great detriment of the plant, particularly if the soil is so situated that the rain or snow will readily lodge in it, and become putrid. The same injury may be occasioned by the bite or puncture of insects while the shoot is yet tender; and as no vegetable ulcer heals up of its own accord, the sooner a cure is attempted the better, as it will, if left to itself, ultimately corrode and destroy the whole plant, bark, wood and pith. The only palliative is the excision of the part affected, and the application of a coat of grafting wax. *Willdenow*, p. 354.

Classification of soils.

The term sandy should never be applied to any soil that does not contain at least seven eighths of sand; sandy soils that effervesce with acids should be distinguished by the name of calcareous sandy soils, to distinguish them from those that are siliceous. The term sandy soil, should not be applied to

any land which contains not less than one sixth of earthy impalpable matter, not considerably effervescing with acids. The word loam should be limited to soils containing at least one third of impalpably earthy matter, copiously effervescing with acids. A soil to be considered as peaty, ought to contain at least one half of vegetable matter. In cases where the earthy part of a soil evidently consists of the decomposed matter of one particular rock, a name derived from the rock may with propriety be applied to it. Thus if a fine red earth be found immediately above decomposing basalt, it may be denominated basaltic soil. If fragments of quartz and mica be found abundant in the materials of a soil, which is often the case, it may be denominated granitic soil; and the same principle may be applied to other like instances. In general, the soils, the materials of which are the most various and heterogeneous, are those called alluvial, or which have been formed from the depositions of rivers; and these deposits may be designated as siliceous, calcareous, or argillaceous; and in some cases the term saline may be added, as at the embouchure of rivers where their alluvial remains are overflowed by the sea. Oxide of iron is to be found in almost all soils, and is the general cause of their reddish brown colour. Where this substance is in evident superabundance, the term ferruginous clay, sand or peat, is very properly applied. The leading classes of soils, as far as cultivation is concerned, are calcareous, argillaceous, ferruginous, aquatic, peaty and saline.—*Davy.*

In the agricultural establishments of Fellenburgh, at Hoffwyl, and of Professor Thaer, at Moegalin, in Prussia, the predominant earth constitutes the genus; the colour produced by its mixture with other earths, salts or metallic oxides, the species; and the degree of commination, or of colour, the varieties.—*Loudon.*

The practical use of a nomenclature of soils is to indicate the grains, grasses and vegetables to which they are respectively best adapted. The terms wheat soil, barley soil, turnip soil, grazing soil, clover soil, &c. have already partially obtained among farmers. Geological chemistry will enable us to adapt plants to their peculiar soil with greater certainty, and to save great labour and expense to the cultivator. Loudon gives a list of plants that grow naturally upon different soils in Britain.

As the systems of roots, branches and leaves are very different in different vegetables, so they flourish most in different soils. The plants that have bulbous roots require a loose and a lighter soil than such as have fibrous roots; and the plants possessing only short fibrous radicles demand a firmer soil than such as have top roots or extensive lateral roots.—*Davy.*

ON DISEASES AND ACCIDENTS OF FARMERS.

Observations on the means of preventing and relieving the accidents and diseases, to which farmers are particularly liable. By JAMES MERSE, M. D.

[From the American Medical Society, for promotion.]

...the head, by its weight and the absorption of the rays of the sun; while one of the other materials mentioned, diminishes much of their force by its comparative lightness, and by the reflection of the sun from its light colour. Another remedy is to avoid the unnecessary severe exertion of the body, arising from the too common practice of competition for quick work among the labourers. The difference in the feelings of those the day after they have thus absurdly over-exerted themselves, and of others who leisurely finished their tasks, is very great. In the one case, a stiffness in the limbs and a general indisposition, are often the consequence; while in the other, the labourers are ready, upon the return of the day, to renew their work. Some farmers upon a false pecuniary calculation, encourage such trials of speed. But exclusively of the risk of health, and consequent loss of time, more is lost by running over a field, than is saved in wages and food. Good and clean work, more than speed, is desirable.

A greater quantity of ardent spirits than necessary, is commonly used in the harvest field. A nominal quantity per day is sometimes stipulated for, but this seldom holds out, and a farmer who is anxious to secure his crop, and keep his hired men in good humour, will not hesitate to indulge them in an additional supply, if demanded. Entire relief from the disagreeable task of measuring out spirits may often be avoided, by contracting with a person to cut and secure the crop; a gentleman farmer should always endeavour to do so. When a general indisposition takes place after severe labour in the field, the best remedy is, an infusion of *thoroughwort*, a plant growing along creeks and in moist places. It should be taken strong at first, to operate as an emetic and purge, and afterwards it may be drunk weak, but warm, to promote perspiration, which it will do most powerfully. The person affected must lie in bed. If the head ache, ten or twelve ounces of blood should be taken away; and as little nourishment as possible be given, until the stomach recover its tone, and the whole system its healthy action.

A still more serious peril attends harvest. This is the sudden loss of sense and muscular power, from imprudently drinking cold water, while the body is very warm. The remedies must be active and speedily applied, or death will be the inevitable consequence; even before a medical man can attend. Whiskey or spirit, mixed with hot water, if at hand, must be freely given: the first draught may consist of equal parts. The body should be well rubbed with coarse towels, dipped in hot whiskey and water: the temples chafed with pure whiskey, while a large kettle of hot water is heating. If possible, the sufferer should be put into a hot bath; but if a bathing tub be not at hand, the body is to be stripped and blankets dipped in hot water must be laid over it, renewing them as they cool. Hot toddy is also at the same time to be freely given, if the power of swallowing remain.

Serious wounds have sometimes happened, from careless persons leaning a pitchfork against the side of a stack of hay or grain, with the forks up and men sliding down upon them. The master of a farm may often prevent such and other accidents, by directing his attention to the thoughtless conduct of labourers.

Concussion of the Brain, and Strokes on the Head, require the loss of more or less blood, in proportion to the degree of injury received, and the age, habits and constitution of the person injured. The sooner it is taken away, after the accident has happened, the better. The person should be bled if possible, while sitting or standing up, so as to induce a faintness, and thus save the loss of an unnecessary quantity of blood. A purge of Glauber's or Epsom salts, or castor oil, should also be given, and entire

the least possible quantity of liquid vegetable food, for two weeks, is to be taken. Rest and silence are essential. As serious complaints have occurred after an interval of between ten and sixty days, from a blow on the head, great attention should be paid, not to excite the system to the production of the morbid state, to which it is predisposed from the accident. The same remarks will apply to falls.

Sprains.—When a limb has been sprained, and the accident happens at a distance from home, the sufferer should, if possible, be conveyed home in a carriage of some sort; the part is then to be bathed with cold water, and kept in a horizontal position. If much inflammation attend, leeches should be applied. The most absolute rest is necessary to a cure, and the sufferer must make up his mind to endure the confinement, unless he prefers a stiff joint or to risk a fall and increase of the complaint, by walking before he ought to put his foot to the ground. Even walking up and down stairs, to and from bed must be avoided. After the inflammation and swelling have subsided, the part must be gently rubbed with the hand, upon which a few drops of sweet oil have been dropped, for ten minutes, three times a day: the good effects of friction in removing the rigidity of a part are slow, but certain. Bathing the part with warm water occasionally, before rubbing it, will assist in relaxing the muscles and tendons. After a severe sprain of the ankle, a laced boot should be worn to give a mechanical support to the joint.

Sore Lips.—The febrile state excited in the system by the heat of the weather, the stimulating food and strong drink, so freely consumed during harvest and summer, are the causes of this complaint, which is very painful and often continues for weeks. Sometimes the cuticle of the lips will entirely peel off. The means of cure are first, a purge of an ounce or half an ounce of Glauber's or Epsom salts, or the same quantity of castor oil, a vegetable diet for a few days, and a total abstinence from salt meat. The lips may be bathed three or four times daily with clear lead water, in the proportion of twenty grains to a pint of rain or spring water, and then covered with a soft linen rag smeared over with an ointment, composed of bees' wax and sweet oil, or fresh hogs' lard. If pain attend the removal of the rag, the water may be applied without taking it off. A much neater application is gold-beaters' skin, with which the lips should be covered after using the lead water, and permitted to remain on.*

Inflamed Eyes.—The remedies for a slight complaint, are opening the bowels by any of the medicines just mentioned, bathing the eyes frequently with clear lead water; living on a vegetable or milk diet, wearing a light hat, and avoiding exposure to strong light. When the complaint is severe, in addition to the foregoing, twelve or sixteen ounces of blood should be taken away from the arm; very low vegetable diet, strictly adhered to, aided by confinement in a dark room, and purges every third day. If the disease be obstinate or attended with pain, blood should be drawn from the head and temples by cups and leeches. This local depletion seldom fails to relieve. The jelly of the pith of sassafras applied to the eye, will give ease. After the inflammation is reduced, wash the eyes three or four times a day, with a solution of white vitriol in soft water. The proportions are ten grains to half a pint of water. Watery eyes may be cured by the same remedy, and the return of the weakness prevented, by washing the eyes with strong brandy and water twice a day.

* The gold-beaters' skin must be applied dry; if moistened, it crumples and cannot be made to lie smooth. The part to which it is applied is first to be wetted, and the skin then laid on having previously slit the edges to accommodate it to the lips.

The exposure of the eyes to the light must be gradual, after the inflammation has subsided, and two or three days must be employed in accommodating them to broad day-light. Persons with weak eyes, when reading, should sit with their backs to the light, and when exposed to a blazing sun, goggles must be worn.

Chilblains.—Are often produced from exposure of the hands and feet to the cold, and then to the heat of a fire. In some persons they are occasioned by unavoidable exposure to the daily change of temperature in the open air, and in the house. Various remedies have been prescribed for this troublesome disease. It is often removed by bathing the parts affected in cool water, twice or thrice daily, and keeping them in it until the itching and pain are allayed. They are then to be covered with a warm stocking or glove. In others, the application of spirits of wine, soap liniment, or a strong solution of alum, or of strong vinegar, or of a mixture of equal parts of oil of turpentine and balsam capsaiva; a mixture of two parts of camphorated spirit of wine, and one of lead water; or a mixture of one part of tincture of Spanish flies, with six of soap liniment, in different cases have afforded relief. The means of prevention are, to avoid the causes mentioned. The complaint is often produced by exposure of the feet to partial draughts of cold air from a door, while the body is immersed in the warm air of the upper region of the room.

Whitlows.—There are different species of this painful disease, all of which should be attended to without delay. They often proceed from bruises, pricks of splinters, &c. No benefit arises from promoting suppuration in the part. The best practice is to diminish the inflammation by leeches, and the application of a blister; when the pain extends up the arm, attended by fever, twelve ounces of blood should be taken away. If suppuration takes place, make a free incision down to the bone. A full dose of opium may be given three quarters of an hour before the operation. Putting the hand in warm water after the use of the lancet, will ease the pain. If permitted to run its course, two months of suffering will be often endured.

Diseased Teeth.—General bad health and various constitutional irritations, without constant pain, often proceed from one or more diseased teeth. No person ought to permit a decayed tooth to remain in his mouth, provided it is found to be too far gone to be plugged, an operation which is earnestly recommended as soon as possible after the discovery of a black spot. The progress of the decay of a tooth, after the appearance of the slightest defect, is gradual but certain. If it be on the side adjoining another tooth, it should be filed out. For either operation, a regular dentist should be employed. The sooner it is done, the less will be the deformity, pain, and expense, and the greater the certainty of insuring a continued use of the tooth, considerations all of importance. The too general neglect of their teeth, by persons resident in the country, often occasions an early decay of them. Those unacquainted with the laws which regulate the animal economy, and particularly with the powerful effects produced in the system, through the sympathy of the nerves, may find some difficulty in acceding to the opinion, that one or more decayed teeth could produce disease, or affect the continuance of one, in a part remote from the tooth. Such, nevertheless, is the fact. It may probably induce many to attend to the caution given respecting the propriety of removing decayed teeth, to state a few particulars on the subject. The incredulous may be prepared to admit the theory, from the well known fact of the alarming convulsions produced in children, by the irritation of the nerves from the pressure of one or more rising teeth from the jaw, against the nerves in the gums.

The effects of decayed teeth in adults are not less remarkable. Violent rheumatisms in various parts of the body, epileptic fits, dizziness in the head, long continued and severe pains in the head, intermittent fevers, and partial palsy, and that old complaint *indigestion*, which so many have recently found to be a new disease, under the fine name of "*dyspepsy*," abscesses in the cheek, and lastly, ulcers in the jaw and chin, attended with a general derangement of the female functions, have all been cured by the removal of one or more decayed teeth. In some cases the tooth, although it gave pain, exhibited no decay.*

(To be continued.)

MARYLAND TOBACCO.

[Statement of Maryland Tobacco, shewing the quantity grown in 1820, 1821, 1822, 1823, and 1824, with an estimate for the year 1825; also the number of hogsheads shipped each year, with the sales in Europe, and the stock on hand there at the end of each year—commended to the notice of Ohio Planters by their friend J. S. Skinner, Editor of the American Farmer.]

Of the crop of 1820—shipped in 1821.
From Baltimore to Amsterdam, *hhds.* 6,455
Do. Rotterdam, 3,739
Do. Bremen, 2,953
Do. Stockholm, 130—13,277

From D. of Columbia to Amsterdam, 3,526
Do. Rotterdam, 924
Do. Bremen, 1,323
Do. Cowes & a market, 2,267
Do. Nice, 22—8,077

Number of *hhds.* shipped from 1st January to 31st Dec. 1821, . . . 21,854
To which add remaining in the State 1st January, 1822, . . . 8,848

hhds. 30,202
From which deduct what remained on hand, 1st Jan., 1821, in the State, . . . 3,045

Which makes the growth of 1820, to be *hhds.* 27,157

Of the growth of 1821—shipped in 1822.
From Baltimore to Amsterdam, *hhds.* 6,098
Do. Rotterdam, 6,127
Do. Bremen, 4,749
Do. Hamburg, 630
Do. Cowes & a market, 338
Do. London, 805
Do. Boston, 130—18,377

From D. of Columbia to Amsterdam, 2,686
Do. Rotterdam, 828
Do. Bremen, 2,426
Do. Cowes & a market, 2,175—8,715

Number of *hhds.* shipped from 1st January to 31st Dec. 1822, . . . 27,092
To which add what remains in the State 1st January, 1823, . . . 13,380
hhds. 40,472

From which deduct what remained in the State 1st Jan. 1822; as corrected from statement of last year, 8,238, instead of 8,848, . . . 8,238

Which makes the crop of 1821, to be *hhds.* 32,234

* For the satisfaction of the medical reader who may wish to have more authorities than one for the evils of diseased teeth, I refer to Dr. Darwin's *Zoonomia*, vol. 1, sect. 25, 2d. Dub. edit.; vol. 2, p. 169—172—330. Philad.

Of the crop of 1822—shipped in 1823.

From Baltimore to Amsterdam, *hhds.* 6,220
Do. Rotterdam, 7,885
Do. Bremen, 6,393
Do. Hamburg, 1,080
Do. Antwerp, 301
Do. Stockholm, 117
Do. Liverpool, 169
Do. London, 125—22,285

From D. of Columbia to Amsterdam, 7,714
Do. Rotterdam, 247
Do. Bremen, 805
Do. Cowes & a market, 1,848—10,614

Number of *hhds.* shipped in 1823, . . . 32,903
To which add what remained in the State 1st Jan. 1824, . . . 8,476
hhds. 41,379

From which deduct stock in Maryland, 1st Jan. 1823, as before stated, . . . 13,560

Which makes the crop of 1822, *hhds.* 27,999

Stock in Europe, 1st Jan. 1824.

In Bremen, . . . *hhds.* 4,411
Amsterdam, . . . 12,651
Rotterdam, . . . 5,249
All other parts of Europe, say 600—22,911

Sales in Europe in 1823.

In Bremen, . . . *hhds.* 6,572
Rotterdam, . . . 8,087
Amsterdam, . . . 7,282
All other parts of Europe, 1,200—23,141

Of the crop of 1823—shipped in 1824.

From Baltimore to Amsterdam, *hhds.* 2,692
Do. Rotterdam, 8,803
Do. Bremen, 3,277
Do. Hamburg, 402
Do. London, 50
Do. Stockholm, 116
Do. Antwerp, 183—15,523

From D. of Columbia to Amsterdam, 3,208
Do. Bremen, 1,099
Do. Cowes & a market, 915—5,222

Number of *hhds.* shipped in 1824, . . . 20,745
To which add what remained in the State, 1st Jan. 1825, . . . 7,687
hhds. 28,432

From which deduct stock 1st Jan. 1824, as before stated, . . . 8,476

Which makes the crop of 1823, to be *hhds.* 19,956

Stock in Europe, 1st Jan. 1825.

In Amsterdam, . . . *hhds.* 7,496
Rotterdam, . . . 6,573
Bremen, . . . 2,580
All other parts of the Continent, 500
London, . . . 1,800—18,429

Sales in Europe in 1824.

In Bremen, . . . *hhds.* 7,761
Amsterdam, . . . 11,244
Rotterdam, . . . 6,902
All other parts, . . . 500—26,407

edit. Dr. Rush, in Med. Repos. New York, vol. 8. n. 285, and his works, vol. 3, 3d edit. p. 349. Sir J. Cooper's Surgery, p. 6, 7, London, 1824.

<i>Of the crop of 1824—shipped in 1825.</i>	
From Baltimore to Amsterdam, hds.	2,295
Do. Rotterdam,	8,786
Do. Bremen,	6,554
Do. Hamburg,	545
Do. London,	234
Do. New York and coastwise, }	700—19,114
From D. of Columbia to Amsterdam,	2,060
Do. Rotterdam,	256
Do. Bremen,	1,636
Do. Cows & a market,	3,305
Do. Providence,	100—7,357
Number of hds. shipped in 1825,	26,471
To which add stock remaining in the State, 1st Jan. 1826, . . .	7,371
	<i>hds.</i> 33,842
From which deduct stock, 1st Jan. 1825, as before stated, . . .	7,687
Which makes the crop of 1824, to be	<i>hds.</i> 26,155

<i>Stock in Europe, 1st Jan. 1826.</i>	
In Rotterdam, including two ships not arrived, . . .	<i>hds.</i> 5,258
Amsterdam, . . .	5,829
Bremen, . . .	4,700
London, . . .	1,422
Hamburg, . . .	400
All other parts, . . .	200—17,809

<i>Sales in Europe in 1825.</i>	
In Amsterdam, . . .	<i>hds.</i> 7,825
Rotterdam, . . .	9,582
Bremen, . . .	7,452
Hamburg, . . .	600
London, . . .	330
All other parts, . . .	400—26,189

Estimated crop of 1825, (to be inspected
in 1826,) is . . . *hds.* 26,000

ON GRAZING.

[We take pleasure in copying from a Delaware paper the following sketch of the enterprise and success of one of the most respectable and judicious graziers, on whom our market depends for those solid items of comfort and good living—beef, mutton, pork and butter.]

Grazing.—We have received from a friend of Mr. Barney, a statement of the product of his grazing establishment, some notice of which was recently presented to the view of our readers, in a communication in our columns. As this statement will be likely to be highly interesting to a large portion of our readers, and may be of considerable service to many, we feel a pleasure in laying it before them.

Mr. Barney has resided in our state nine years, within which time he has raised the greatest part, and fed and disposed of all the following animals. In the year 1816, November 31st, he sold to Rusk and Kelso, of Baltimore, 70 head of oxen, at \$90 per head, amounting to \$6,300; each weighing upwards of 900 lbs. and carrying 150 lbs. of rough tallow. In the spring of 1817, he sold to G. Elliot, of the same place, 8 Bakewell sheep, for \$27 50 each, all wethers. In the following spring, he had 22 slaughtered for the same market, which brought him \$450; and in 1819, he sold to Mr. Elliot 17, for \$350, the aggregate weight of which was 1960 lbs. and rough tallow 36 lbs. He sold, at the same

time, to Geo. Pepper, a hog, for \$85, weighing 675 lbs. and to G. Elliott 31 sheep, for \$450, all of which were slaughtered in Baltimore, March 8, 1821, he sold to J. and G. Rusk, 3 steers, 4 years old, for \$15 per hundred, weighing 4190 lbs. and remarkably fat; a rump of the largest of which was presented, by Gen. Ridgley, to the President of the United States. On the same day he sold to Mr. Elliot 31 fat wethers and ewes for \$371. March 18, 1822, he sold to Wolpert and Miller, of Philadelphia, a cow for \$105 70, the four quarters of which weighed 1057 lbs. nett beef; and, at the same time, to Peter Inckle 33 sheep, weighing 3385 lbs. nett mutton, for \$495. March 29th, 1823, to James Elmore, of Baltimore, 2 steers, 4 years old, weighing 1405, and 1306 lbs. nett beef, for \$12 per hundred, and April 5, of the same year, to Thomas Curtain, 40 sheep, one and two years old, for \$520, weighing 3834 lbs. nett mutton, and to G. Bowers, a hog, weighing 751 lbs. nett pork, for \$75. March 8, 1824, to James Elmore, a five year old steer, for \$15 per hundred, weighing 1607 lbs. and amounting to \$241 05, to Thomas Curtain, 16 sheep, at \$13 per head, and to G. Bowers, 2 hogs, for \$90. January 26, 1825, to Charles Nonater & Co. of Philadelphia, a five years old twin heifer, for \$420, the four quarters of which contained 1678 lbs. nett beef, and one four year old steer for \$100, and weighing 1397 lbs. nett beef. And a short time since, 46 sheep, in Philadelphia weighing upwards of 4300 lbs. The whole of the sales above stated amount to upwards of \$13,500, in less than nine years and six months!

It may be observed that the last mentioned heifer, which brought \$420, the cow sold to Wolpert and Miller, in 1822, for \$105 70, the steer sold to J. Elmore, in 1824, for \$241 05, and two calves sold for \$40, amounting in all to \$806 75, were all descended from the cow sold to T. and G. Rusk, for \$201 30; and which cost Mr. Barney but \$50; making the sales of the cow and her descendants \$1008 15; exclusive of the cheese and butter made from the two cows. The twin heifer was a cross of Gen. Ridgley's Bakewell breed of cattle, and was a very remarkably fine beast.

So much for Mr. Barney's establishment; and such is a sample of what the state of Delaware is susceptible of being made to produce under proper management and attention.

DISEASE OF PIGS—INQUIRY.

MR. SKINNER,

Can any of the correspondents of the American Farmer, suggest a remedy for the violent purging to which young pigs or shoats are subject soon after weaning? If so, the information would oblige,

A SUBSCRIBER.

SALE OF SHEEP IN NEW YORK.

The sale of Mr. Candler's Saxony sheep, took place at New York on Wednesday week. The highest sale was that of a buck, which was purchased by Mr. Hurd, of Dutchess county, for \$350. The lowest price brought by the bucks, was \$160. The ewes generally brought from \$36 to 80 or \$85. Mr. Hulbert, of Winchester, (Conn.) purchased a very fine ewe for \$60, for which he was offered \$120 before night. Mr. H. has already some fine Saxons at home, and such is the rage for possessing this description of sheep, that he has, within a few weeks, sold . . .

a fortnight old, for \$480, and has been offered \$200 for another.

CATTLE AND SHEEP AT SMITHFIELD, LONDON.

1811—Beasts,	125,021,	Sheep, . . .	966,400
1812—Beasts,	133,854,	Sheep, . . .	953,630
1824—Beasts,	170,207,	Sheep, . . .	1,394,467
1825—Beasts,	169,038,	Sheep, . . .	1,244,300

RURAL ECONOMY.

CAST IRON GRIST MILL.

MR. SKINNER, *New-Jersey, near Philadelphia.*

In the 40th number of the Farmer, my attention was drawn by Mr. Smith, of Virginia, to a late invention of a cast iron grist mill, represented "to be capable, with one horse, of grinding 10 bushels of wheat or rye per hour, sufficiently fine for flour." This mill seemed valuable to this and other neighbourhoods, where water mills are not numerous; and from the inconveniences of last summer's drought especially, I have been at some trouble to investigate its merit. I have profited by the diversified information of your many correspondents: I would, therefore, as a token of my obligation to them, add the following description of the structure, performance, &c. of said mill, to the common stock of knowledge, so copiously contributed to your excellent paper for public benefit.

The mill is composed of two circular cast iron plates, 18 inches diameter and 1 inch thick, finely furrowed alike, with a breaker, consisting of two parts, for breaking ears of corn, plaster, &c.—one of which parts is firmly affixed to the upper plate, and one to the lower. The upper plate is permanent, and has attached to it a curb, or hopper, 6 inches diameter at the bottom, and 15 inches at the top; there is a hole through this plate, corresponding with the bottom of the curb: the interior of the curb is lined with angular teeth or jaws, reaching from the bottom nearly to the top. The lower plate is the runner, and has attached to it a conically shaped breaker, from 4 to 5 inches diameter, in which are similar angular teeth or jaws—this, when the plates are put together for working, passes in'o the curb, and nearly through it, forming the breaker, for breaking all articles fine enough to be received between the plates. The spindle of the mill passes through this breaker, and is regulated by two cross bars, one at the top, and one at the bottom of the mill, and passing through them. It runs on a pivot in the usual way, and is centred on a bridge tree, to be raised or depressed, as fine or coarse grinding is required. Two horses grind from 8 to 10 bushels of ears of corn for provender per hour; and from 6 to 8 bushels of rye per hour, fine enough for distilling. Four horses grind from 12 to 14 bushels of rye per hour. Were these mills driven by water, they are supposed to be equal to 44 feet mill-stones in execution. They require but little room, and only the same wheel work as other horse mills. The price of a single right with a mill, exclusive of gearing, is one hundred dollars. A single mill weighs about 250 lbs.

With respectful consideration,

D. G. S.

* Mr. Smith does not vouch for the truth of it:—We do not believe there is any such mill to be relied on for grinding with one horse one bushel of wheat per hour, fit for family use: much is said in the papers of these labour-saving family mills, and surely, since droughts are so intense and numerous, nothing can be more desirable, or would be more saleable than such contrivances: why then are they not in general use? Where are they to be seen? Who has, even for two years, used a horse mill for grinding for family use? Who has seen two cast iron surfaces used for grinding for one year?—The fixtures for grinding plaster of paris, on the principles of the rolling mill are common, and answer their

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

ON CONJUGIAL HAPPINESS.

(Continued from p. 8.)

Perhaps on some occasion or other, in the frolic of the moment, without in the least degree intending to annoy you, your husband may toy, and laugh, and flirt, while in company, with some pretty girl present. This generally makes a wife look foolish; and it would be as well, nay much better, if he did not do so. But let not a shade of ill humour cross your brow, nor even by a glance give him, or any one present, reason to think his behaviour annoys you. Join in the laugh and chat, and be not outdone in cheerfulness and good humour by any of the party. But remember, gentle lady, there must be no *acting* in this affair: the effort must extend to your *mind* as well as your *manner*; and a moment's reasoning on the subject will at once restore the banished sunshine. The incomparable Leighton says, "The human heart is like a reservoir of clear water, at the bottom of which lies a portion of mud: stir the mud, and the water gets all sullied. In like manner, does some strong passion or peevish feeling rise in the heart, and stain and darken it as the mud does the water." But should there be a prospect of your husband often meeting with this lady in question, endeavour at once to break off the intimacy by bringing forward some pretext consistent with truth, (for to *truth* every thing must be sacrificed,) such as, You do not like her; the intimacy is not what you would wish, &c. &c. Never, however, avow the *real* reason: it will only produce discord, and make your husband think you prone to jealousy—a suspicion a woman cannot too carefully guard against. And there is often in men an obstinacy which refuses to be conquered of all beings in the world *by a wife*.—A jealous wife (such is the erroneous opinion of the ill-judging world) is generally considered a proper subject for ridicule; and a woman ought assiduously to conceal from her husband, more than from any one else, any feeling of the kind. Besides, after all, gentle lady, your suspicions *may* be totally groundless; and you may possibly be tormenting yourself with a whole train of imaginary evils. As you value your peace then, keep from you, if possible, all such vexatious apprehensions, and remember, a man can very ill bear the idea of being suspected of inconstancy even when *guilty*; but when *innocent*, it is intolerable to him.

I never would recommend a wife to have on a visit with her an attractive girl. Novelty and constant opportunity are so powerful, and the young lady, full of vanity, and wholly divested of care, forms perhaps a very agreeable contrast to the many anxieties and annoyances which may at times cloud the brow of the best tempered wife in the world. Do not entangle yourself with the *cause*, if it can be avoided; and you will not have to lament its *effects*.

But let me for a moment suppose a circumstance occurs in which your husband's *heart* is entangled, or that there appears a danger of his *affections* being drawn from you. This, in truth, is the bitterest wound a woman's heart ever received, and none but God can direct her aright. To him, therefore, (if she be under the influence of religion,) she will at once go, and at his footstool pour forth every thought of her heart. The comfort she implores she certainly will receive; the guidance she solicits will assuredly be granted. "The wife forsaken and

end; but we wish to see the *flour mill*: we believe there is nothing better than the old fashioned hand mill. We will gratuitously circulate for the inventor or proprietor a knowledge of any such mill through all the states.—
ED. AM. FARM.

grieved in spirit," is an object of peculiar care to Omnipotence; and her sighs and tears shall not be unnoticed. On this important subject, all I shall say is, let circumstances, discretion, and good sense be your direction. But, as you value your peace, as you hope to win your husband back again, avoid an angry debate. Gentle and wise remonstrance may most probably make him all you wish. Upbraid him, and make his home uncomfortable;—and a hundred to one he is lost to you forever.

"If husband and wife keep within their proper department, if they confine themselves to the sphere allotted to each by Providence and nature, there need be no disputes about power and superiority, and there will be none. They have no opposite, no separate interests, and therefore there can be no just ground for opposition of conduct."

Let me intreat your particular attention, gentle lady, to the following advice.—Whenever any little discord or coldness takes place between you and your husband, remember that concession is *your* duty rather than *his*, and *never close your eyes in sleep* till you have endeavoured to obtain a reconciliation. Tell him the resolution you have formed; and then you may good-humouredly add, that perhaps he would not find you so very forgiving, but really you should dread breaking through your determination. Again let me intreat you to adopt this plan: it may appear trifling and immaterial, but you do not, you cannot without experience, know the wide-spreading good it may produce, the wide-spreading ills it may prevent.

Many a matrimonial dispute occurs, not so much from an unwillingness to give up the contested point, as from a dread of being conquered. Beware of the slightest approach to contradiction, and be assured every little dispute between man and wife, even in itself of the most trivial nature, is dangerous. It forces good-humour out of its channel, undermines affection, and insidiously, though perhaps insensibly, wears out and at last entirely destroys that cordiality which is the life and soul of matrimonial felicity.

Without intending it, I find I have prolonged my remarks on this subject to an extraordinary length. I will now therefore endeavour in a few words to sum up the whole matter. Do you wish, gentle lady, to make your husband *good, mild, tender, amiable*; in short, all that he should be? Let me *whisper* to you the secret: Endeavour by prayer and every effort to make him a *religious* man, and the work is accomplished.—And now let me for a moment indulge in the blessed supposition that you are both in the fold of Christ, and heirs together of the grace of life. Then, in truth, happy was the day you were born, and happy the day which united you! And O! thrice blessed will be the hour when the everlasting gates shall be lifted up, and you shall both be presented faultless before the throne of God's glory with exceeding joy! (Jude 24.)

Chapter III.

ON PRUDENCE AND DECORUM.

"Though a woman *before* her marriage may be admired for her gaiety, her dancing, dress, painting, singing, &c. yet *after* it, we expect her character to display something more *substantial*. To a man who must spend all his days in her company, these little superficial decorations would speedily become insipid and unimportant. Love can be preserved only by the qualities of the heart, and esteem secured by the domestic virtues."

"A man does not want to be dazzled in his matrimonial connexion, or to possess a partner who seeks the admiration of coxcombs or beaux. He wants a person who will kindly divide and all-viate his cares, and prudently arrange his household. He seeks not a coquette, a fashionist, a flirt; but a comfortable assistant, companion and friend."

"On the day of her marriage," says an admired writer, "a woman's tour of gaiety should end." In one of the Gentoo countries, during the wedding-day, a large fire is made, and the bride enters with a little basket in her hand, containing all her ornaments, rude and simple as they are—shells, beads, &c.—and flings them into it; intimating her intention of assuming for the future the dress as well as character of a matron—O! that our British matrons would take a hint from these wild and untutored Indians!

How indecorous, offensive, and sinful, is it to see a woman exercising authority over her husband, and saying, "I *will* have it so. It *shall* be done as I like." But I should hope the number of those who adopt this unbecoming and disgraceful manner is so small as to render it unnecessary for me to enlarge on the subject.

Never join in any jest or laugh against your husband. He may be a plain and insignificant, even a ridiculous man: be it so; why did you marry him? You should have known all those defects before marriage. It is now too late: and as a wife, *self* (not to say a word of duty) calls on you to hide his faults; and, whenever you possibly can, to bring him forward and make him of importance.

Assiduously conceal his faults, and speak only of his merits. In the married life, confidants are by no means desirable. You may be listened to with sympathy and interest;—but will this redress your grievance? By no means. Therefore never complain of him. In the first place, you violate a sacred duty by exposing your husband's faults; and in the next, even a certain degree of female dignity should combine with better motives to prevent it.

I would also strongly recommend a concealment from others of any little discord or disunion which occurs between you. Repeated with additions and aggravations, it only gives food to the busy whisper of the malevolent, and, as the witty Richardson says, "is sure to be remembered long after the honest people have quite forgotten it themselves." Besides, on those occasions, rely on it, the world is much more inclined to be your husband's advocate than yours.

In my opinion, there can hardly be a more despicable object than a married woman receiving the particular attentions of any man but her husband.

A *flirting girl* is indeed bad enough; but a *flirting married woman* should be an object of contempt wherever she appears.

Perhaps your husband may be a plain man, or an old man; and though possessing both sense, merit, and feeling, neither cultivated nor captivating. Let this circumstance make you peculiarly circumspect in your conduct. The eye of the world is on you; and though your husband may scorn to betray, even by a look, any expression of jealousy, believe me it gives him no pleasure to see you dancing and chatting away with every young man who approaches you; for, at the moment perhaps when his good sense and manly pride make him smile, and join in the laugh and chat around, his heart may be exceedingly vexed and fretted at what he is ashamed to acknowledge even to himself. To say the truth, I never met with any husband, handsome, ugly, young, or old, who was pleased at seeing his wife's conversation and attraction much engrossed by other men.

Be you ever so conscious of a superiority of judgment or of talent, never let it appear to your husband. "A wife rules best by seeming to obey." And a man cannot endure the idea of inferiority in intellectual endowments. The very idea of being reflected on makes him infinitely more obstinate, and more wedded to his own opinion, when perhaps a little management and good sense would bring him at once into your plans and wishes.

(To be continued under the head of Prudence, Economy, &c.)

SPORTING OLIO.

PEDIGREE AND PERFORMANCES OF
ECLIPSE.

(Concluded from p. 15.)

7. Next day; the city plate, free for all horses; with 30 gs. added; four mile heats. Eclipse won both, beating Mr. Fettyplace's gr. h. Sulphur, aged, Taylor's Forester being distanced in the heat. Here, 10 st. only being required, he was ridden by a light weight,* and bet on 10 to 1 at starting, in his favour.

8. At Canterbury, July 25, he walked over for the King's 100 gs. none caring to start against him.

9. Two days after, at Lewes, he ran two heats for the King's plate of 100 guineas, against Strode's Kingston, 6 years old, by Sampson: it is almost needless to say he won it.

10. Sept. 19, at Lichfield, he beat Mr. Freeth's Tardy, by Matchless, both heats, both horses 5 years old, for the King's plate, being the fifth won by him in the first year.

11. At New Market first Spring meeting, 1770, the 17th of April, "a match," Mr. Wildman's Eclipse, by Marske, beat Mr. Wentworth's Bucephalus, by Regulus, 8 st. 7 lbs. each, B. C. Mr. Wildman staked 600 gs. to 400 gs. p. p. Betting at starting, 6 to 4 on Eclipse.

Soon after this race, i. e. within two days, this first of horses became the sole property of Captain O'Kelly, for the sum of 1450 guineas or pounds. O'Kelly was already half proprietor in the winnings of Eclipse, he having purchased that share of Mr. Wildman, at Epsom, immediately after his first race, for 450 guineas, that being the sum he had won upon him at the *no pulling up* system, as stated above. Now, however, Wildman having "put on the pot" on the wrong side of the post, showed a disposition to treat for the other half, and named 1500 guineas; to this O'Kelly objecting, as inadmissible, and Wildman remaining inexorably stiff to his price, agreeably to his wonted practice, O'Kelly proposed an expedient, in the true spirit of sporting, which received the immediate assent of the vender. He exhibited three notes of 1000l. each, and placing two in one pocket (aside,) and one in the other pocket (of his waistcoat,) Wildman was left to choose which he would have; but his ill luck still haunting him, his guess alighted upon the wrong pocket, where lay the single note, in company with a few guineas. These Wildman insisted upon having also; and for this sum was Eclipse delivered over to O'Kelly for life, at a price which, at this day we consider trivial indeed, and even then was considered too cheap. But O'Kelly was probably the keenest *all length* person that ever laid a bet, and Wildman was no doubt afraid of the tricks of his partner.

A few hours after this sporting bargain, (viz. the 19th of April,) Eclipse ran again, and beat Mr. Fenwick's Diana, by Regulus, Mr. Strode's Penner, and the Duke of Grafton's Chigger; but al-

*This may have been John Oakley, he riding under such name; but as for the assumption that John could, by any chance whatever, be employed by Mr. O'Kelly, or any other sporting gentleman, 'tis quite out of the question. He was at the time in the employment of Lord Abington, who discharged him for making a ruinous cross, and was afterwards whipped off the heath at Newmarket, for being a scoundrel. Rather a bad recommendation to a confidential situation about a stallion of such reputation.

though thus placed in the heat, when they came to run the second, the old story of "the rest no where" was again played off, and all three were distanced. This was (as said) at Newmarket, R. C. three-miles-and-a-half, for the King's 100 guineas; 15 to 1 on Eclipse.

Eclipse's new master was too good a judge to give away a chance of losing, and therefore seldom allowed his men, Sam Marriott and Giles Edwards, to know which was to ride until the time of mounting; but one or the other did this duty during the year (*Annis Mirabilis*) of his running, and acquitted themselves without suspicion. His remaining achievements (seven in number,) may here be briefly enumerated.

12. At Guildford, on the 5th June, 1770, O'Kelly's Eclipse walked over for the King's 100 gs.

13. At Nottingham, July 3, following, he walked over that course for the King's 100 gs.

14. At York, August 20, he also walked over for the King's 100 gs.; and (15,) on the 23d, he beat Mr. Wentworth's Tortoise, and Sir C. Bunbury's Bellario, for the great subscription of 319l. 10s.—one four-mile heat. Odds at starting, 20 to 1 on Eclipse.

16. At Lincoln, the 3d of September, he again walked over the course for the King's 100 gs.

17. At Newmarket First October Meeting, 3d of that month, Eclipse won 150 gs. and upwards, a subscription, beating Sir C. Bunbury's Corsican, at half speed. Odds 70 to 1 on Eclipse.

And, lastly, he next day walked over the course for the King's 100 gs. for the last time, which closed his performances as a racer.

In truth, not any horse had the shadow of a chance of winning against Eclipse, which caused a good deal of murmuring and some talk about crying him down. This caused Captain O'Kelly (than whom no man could possibly be more averse to disappoint the sporting world, or persons attached to the turf,) to discontinue training him. He became a prominent feature as a stallion, in 1771, and covered during that season at Epsom, at 50 gs. a mare, and 1 g. the groom; but next year, and subsequently, half that price was charged; and, perhaps, a more numerous progeny not any horse was ever sire of. Nearly all the branches of this celebrated stallion were of the first class of racers in their time; and, of his immediate get, they were winners in 344 races.

Eclipse died the 20th of February, 1789, in the 26th year of his age, at Cannons, the residence of Colonel O'Kelly. Being exceedingly feeble, he had been removed thither from Epsom, in a machine constructed for that purpose.—[Annals of Sporting.

MARK ANTHONY,

Bred by John Randolph, of Roanoke, Esq.

Will stand this season, (1826,) at the plantation of Charles Sterett Ridgely, Esq. on Elk Ridge, 12 miles from Baltimore, (late Luther Martin's,) and will be let to mares on the following terms: for bred mares \$25, payable with \$20 on or before the first day of November next; for other mares \$15 each, payable at the same time, with \$12. Insurance \$25 for the blood mares, and \$20 for all others. The insurance money to be paid when the mare shall be covered, to be returned in case she shall not prove with foal; provided, that she shall not have been abused, sold or transferred to another person. He is about sixteen hands high; a fine brown, 5 years old this grass; was got by Sir Archy, his dam by Florizel (never beat, or paid forfeit,) out of Cornelia, the dam of Gracchus; she was by Chanticleer, the best son of old Wildair, and best horse of his day; her dam, by old Celer, the best son of old Janus; grand dam by Mark Anthony, best son of old Pa... himself the best son of Mr. ... Traveller, ...

grand dam by Jolly Roger, out of a Silver Eye, which horse was imported, and the property of Samuel Duval, Esq. and remarkable for the spirit and size of his stock. (See Stud Book.) Good pasturage at Belmont, under Mr. Ridgely's own eye, at the usual rates. Half a dollar to the groom.

GRACCHUS.

[Extract from a letter written to John Randolph, of Roanoke, dated "Upperville, 29th March, 1826."]

"I directed the horse (GRACCHUS,) to be led out in front of the tavern where I put up. He is unquestionably among the finest looking horses I ever saw; upwards, I think, of sixteen hands high; indeed the largest blood horse I ever saw. He is in excellent order. Mr. F. calculates on his making as good a season as he made last year. He has a filly, just dropped, of his get, 9 days old, which, he says, measured when dropped 3 ft. 7 inch. high. I have seen it; it is, withal, very handsome, with good points."

MISCELLANEOUS.

RUNAWAY NEGRO LAW OF DELAWARE.

Be it enacted by the Senate and House of Representatives of the State of Delaware, in General Assembly met, That when a person held to labour or service in any of the United States, or either of the territories thereof, under the laws thereof, shall escape into this state, the person to whom such labour or service is due, his or her agent or attorney, is hereby authorised to apply to any judge or justice of any court of record, or to any justice of the peace, or to any Burgess of a borough or town corporate, who on such application, supported by the oath or affirmation of such claimant, agent or attorney, that said fugitive hath escaped from his or her service or from the service of the person for whom he is agent or attorney, shall grant his warrant under his hand and seal and directed to any sheriff or constable, authorising and empowering said sheriff or constable to seize and arrest said fugitive who shall be named in said warrant, and to bring said fugitive before said officer issuing said warrant, or before some other judge or justice of a court of record, or some justice of the peace or Burgess of a borough or town corporate, which said warrant shall be in the form or to the effect following, viz:—State of Delaware, _____ county, ss. To the sheriff or any constable of said county:—This is to authorize and require you to seize and arrest the body of _____ said to be the slave, (or servant as the case may be) of _____ and him (or her) to bring forthwith before me or some judge of said state or justice of the peace in and for said county (if in Newcastle county add—or some Burgess of the borough of Wilmington) to be dealt with as the law directs; by virtue of which precept the said fugitive therein named may be arrested by the said officer to whom the same is directed, in any part of this state.

SEC. 2. And be it further enacted, That the said fugitive when so arrested shall be brought before the officer in that behalf named, and upon proof to the satisfaction of such officer that the person so seized or arrested, doth, under the laws of the state, or territory from which he or she fled, owe service or labour to the person claiming him or her, it shall be the duty of such judge or other officer aforesaid, to give a certificate thereof to such claimant, his or her agent or attorney, which shall be a sufficient warrant for removing said fugitive to the state or territory from which he or she fled.

SEC. 3. And be it further enacted, That if any person or persons shall obstruct or hinder such sheriff or constable, claimant, agent or attorney, in so seizing, arresting, or removing such fugitive from labour, or shall aid or abet in the rescue of such fugitive, or shall obstruct such sheriff, constable, agent, claimant,

or attorney, or shall assemble together with intention to interrupt such sheriff, constable, claimant, agent or attorney, in the due execution of this act, they shall on conviction thereof by indictment forfeit and pay a sum not exceeding five hundred dollars, and be imprisoned for a period not less than three months nor more than twelve months, and shall be liable to an action at the suit of the owner of said fugitive for damages.

SEC. 4. *And be it further enacted*, That if any captain or commander of any vessel, or other person, shall carry or transport by water, or cause to be carried or transported by water out of this state any person held to labour or service by any citizen or inhabitant of this state, or by any citizen or inhabitant of any other of the United States, or either of the territories thereof, and who shall have escaped into this state, such captain or commander or other person shall pay to the owner of such person held to labour or service, the sum of five hundred dollars, to be recovered by an action on the case, or on conviction thereof by indictment be subject to a fine not exceeding five hundred dollars, and imprisonment not less than three nor more than twelve months at the discretion of the party aggrieved; and such election shall be determined by his bringing his action on the case or instituting his prosecution by indictment.—And if any negro or mulatto shall carry or transport by water any person held to labour or service as aforesaid, he shall, on conviction thereof by indictment be punished by fine or imprisonment, or by being whipped with thirty-nine stripes, in the discretion of the court.

SEC. 5. *And be it further enacted*, That if any suspicious coloured person shall be taken up traveling through this Government without having a sufficient pass signed by some justice or proper officer of the place whence he or she came, approved and renewed by some justice of the peace in the parts through which such persons hath travelled, or shall not otherwise be able to give a good and satisfactory account of him or herself to the justice before whom he or she shall be brought, such person shall, by the said justice be committed to the jail of the county where he or she shall be taken up, and be deemed to be and dealt with as a runaway servant.

SEC. 6. *And be it further enacted*, That this act shall be given in charge to the grand jury by the judges of the court of quarter sessions of this state at the several sessions of said court.

LAW OF MARYLAND.

An act to authorize the Governor and Council of Maryland to appoint the Inspectors of Flour for this state.

Be it enacted by the General Assembly of Maryland, That the Governor and Council shall appoint on or before the first Monday of April next, and annually thereafter, or oftener if necessary, three inspectors of flour for the city of Baltimore and one for the city of Frederick, who shall be governed in their inspections, by the same rules and regulations that at present exist, and shall be entitled to the same compensation they at present receive.

And be it enacted, That the present standard of flour shall be continued until it shall be altered by act of Assembly, or until some other mode of fixing such standard shall be provided by law.

And be it enacted, That in all cases where an inspector may pronounce a flour barrel insufficient, or shall condemn such barrel, it shall be lawful for the owner of such barrel, or his agent, either to cause said barrel to be repaired or to substitute a new one as the case may require, or he may make such deduction from the price of his flour as may be mutually agreed on between himself and the purchaser thereof.

And be it enacted, That all acts or parts of acts of Assembly inconsistent with or contrary to the

provisions of this act, be and the same are hereby repealed.

An act respecting Last Wills and Testaments.

Be it enacted by the General Assembly of Maryland, That in all and every will or wills hereafter to be made, whereby any lands or real property shall be devised to any person or persons, and no words of perpetuity or limitation are used in any such devise, the devisee or devisees shall take an estate in fee simple, under and by virtue of such devise, unless it shall appear by devise over, or by words of limitation, or otherwise, that the testator or testatrix intended to devise a less estate than a fee simple, and provided, such will shall be in all respects executed and proved in the manner prescribed by law.

EMBARRASMENTS OF TRADE IN ENGLAND.

[*The Bell's Weekly Messenger*, one of the most ably conducted papers in England, gives the following summary view of the embarrassments as connected with three great branches of trade:]

In the three branches of our trade, silk, cotton and woollen, the distress and embarrassment become greater from day to day. In the silk trade, it has been undoubtedly assisted by over-manufacture. The manufacturers have not only outrun the public or ordinary demand, but even the public taste. The use of silks in any great extent, is so new amongst us, that the demand is, and for some time will continue, very confined. It neither suits the tastes of the women, in their general apparel, nor their fashions. Our female population may, in time, adopt this fabric as generally as cottons and muslins—but they have not yet adopted it, and therefore there is no demand to take off the vast quantity now forced upon the market. This is one and the main cause of the distress in the silk trade. But an additional power of mischief is certainly given to this cause by the concurrent circumstance, that the difficulties of the times prevent the general dealers from venturing to speculate on any larger stocks than what they require from day to day. There is thus not only no demand from the public, but no speculation or venturing purchases from the retailers. Add again to this, that the bankers and monied men can afford no discounts to enable the manufacturers to hold back their stocks, and wait for a more fortunate state of things.

In the cotton trade, the same causes have operated, added to the most absurd and excessive speculations in the summer of last year. There is an immense stock of raw cotton beyond the demand now in the country, and the price has become most ruinously reduced. We have heard, but we know not the fact from our own knowledge, that the price was first raised to its enormous rate by some most knavish dealers, and the fraudulent conspiracy of some great capitalists—that they thus gained an enormous profit, and have occasioned the ruin of hundreds. Whatever the cause might be, the dealers are now in a most pitiable condition of distress and embarrassment; and under the common calamity of the times—that of a stoppage of all discounts, they are unable to wait a change in the market.

In the woollen trade, the chief establishments of which are in the West and North of England, the distress has been entirely caused by the failure of Wentworth & Co. and of other local banks; and this distress exists to so great an extent, as to involve families, and whole towns and districts in the most deplorable poverty.

Amongst the many wholesale trades affected by the difficulties of the times, is the bookselling and stationers' trade; which seems to suffer beyond its due proportion. The capital embarked in this business, during the last twelve months, is perhaps as great as that engaged in any other of the great

staples of the country; and as, in a season of difficulty and pressure, the first sacrifice which people make is of matters of taste, luxury, and accommodation, to which class literature belongs, the necessities of the times, by abridging, and almost annihilating the demand for books, has fallen with particular hardship upon a most meritorious and worthy set of men, whose capital is not, like that of many other tradesmen, immediately convertible into money.

The question is, how is government to deal with this state of things? Are ministers to suffer it to work out its own remedy, like other commercial reverses; or are they to afford some extrinsic relief, which, without violating the principles of political prudence, may diminish the present mischief, without holding out any encouragement to improvident speculations for the future?

As to the mode of this relief, it should be, we think, by an immediate issue of Exchequer bills, to be advanced upon due, that is fair, security of the stock on hand of the different traders, or upon such other security as they would be enabled to give for the present, and redeem at no long interval. These means were resorted to in those great years of national distress, 1811 and 1817. At these periods, conjointly, though upwards of eight millions were advanced, government did not lose a shilling, and trade was so effectively relieved by this timely aid, that the markets immediately recovered themselves, and thousands of individuals were saved from total ruin.

We strongly and earnestly recommend that something of this nature should be done, and immediately done, as it is notorious to all persons acquainted with trade, that, under the extraordinary pressure of the times, and the contraction of the market, the most solvent firms have become endangered.

[The Ministers contend that the distresses of the day have not arisen from any extraordinary political events; and that therefore it would be a bad precedent, encouraging imprudence, to issue exchequer bills; but seem inclined that the Bank of England should discount on property.]

THE FARMER.

BALTIMORE, FRIDAY, APRIL 7, 1826.

BOARD OF PUBLIC WORKS.

The proceedings of the last Legislature of Maryland, were, in many respects, characterised by a broad, enlightened and liberal policy, which is congenial with the spirit of the times, and honourable to those to whom the people had committed the high trust of legislation—if for nothing else, posterity will not fail to honour them, for having broken ground, in regard to the artificial improvement of the natural resources of the state—resources which, have been suffered to lie dormant under the groveling influence of local jealousy, and a contracted love of popularity, united with what was much more pardonable, a want of adequate knowledge of the capacities of the state, of the means of developing them, and of their immediate and incalculable bearing on its population and wealth. Let us hope, now, that with more light, with more expanded and liberal impressions, all the grosser passions and mistaken calculations of private interest, will depart along with the narrow and false views out of which they sprung, and that, with a single eye to its wealth and happiness, the energies and treasure of the state, may be applied with a liberal but prudent hand to such objects as an enlightened and impartial Board of Public Works, may designate, as being of the highest utility, and within the bounds of profitable expenditure—by profitable, we do not mean that the state is to be actually reimbursed to-morrow for

what it expends to-day; we would have her regard the example of New York, where wisdom pointed to the season and the field, and providence—in spite of the ravings of faction and the sneers of ridicule, sowed the grain, and waited with a fortitude above all praise, for the harvest time. It may, nay it must be, that from any of the great public works, which have been spoken of, the state may not reap any direct return in a year or two or three years; but in the mean time, the money will be expended amongst her citizens, and it only behoves her to be assured that a given work is *practicable*, and the beneficial results ultimately certain. To arrive at this certainty the last legislature commenced with the incipient and indispensable measure of establishing a Board of Public Works, with power to have the resources of the state surveyed by scientific and competent men.

This Board consisting of gentlemen of acknowledged talents, influence and public spirit, happily located, familiar with the fiscal and natural resources of the state, having in every view, a deep interest in the cause which they are appointed to illustrate and promote; their plans will, if any thing can, conciliate conflicting views, ensure public confidence, and unite public exertion for the general good.

We regret that it is not in our power to put on record the law which organises the Board; but we shall take an opportunity of registering it along with the other acts of the last legislature, having reference to the same subject. In the mean time it gives us pleasure to announce that Governor Kent, who is *ex officio*, president of the Board, and personally well qualified to harmonise discordant councils, has appointed an early day, the 16th of this month, for a meeting of the Board in Baltimore, thereby giving not only an earnest of a determination to go seriously to work, but to work on ground that affords the nearest and best view of the interests of this city, between which and all public works connected with the welfare of the state, there must be a reciprocity of dependence and mutual contribution. The Board of Public Works consists of the following persons:—

The GOVERNOR of the State, being <i>ex officio</i> President of the Board.	ISAAC M. KIM,
THOMAS BUCHANAN,	WILLIAM HOWARD,
RICHARD POTTS,	EZEKIEL F. CHAMBERS,
ROBERT W. BOWIE,	R. H. GOLDSBOROUGH,
	and
	LITTLETON DENNIS.

"Annapolis, March 11th, 1826.

"A meeting of the Board of Public Works will be held at *Barnum's Hotel* in the city of Baltimore, on Monday the 16th day of April next.

JOSEPH KENT, President."

✂ We deem it our duty to call attention to the "FRANKLIN JOURNAL AND AMERICAN MECHANICS' MAGAZINE," devoted to the useful arts, internal improvements and general science, under the patronage of the Franklin Institute of the state of Pennsylvania. The Franklin Journal is published in monthly numbers of four sheets each, at \$4 per annum, by S. C. Schenk, 252 Broadway, New York, and by J. Dobson, agent, 103 Chestnut-street, Philadelphia, and edited with ability by a scientific scholar—DR. THOMAS P. JONES, Professor of Mechanics in the institute.

✂ PATENT PHOENIX MILL CANVASS, at Patterson, N. J.—The material of which this canvass is composed, is the best water retted flax that can be procured; the warp and filling are doubled and twisted into twine, which makes the yarn nearly twice the diameter and strength of the yarn of other canvasses: the quantity of material in the same surface is consequently greater, which necessarily increases the durability, and yet its softness and pliability far exceed that of any other description, which in hand

The cloth is woven without starch, which renders it less liable to mildew, and it is a fact well established, that this is the bane of all foreign canvasses, causing more destruction than the actual wear.

The cloth is bleached by steeping in an alkaline ley, without any preparation that can injure the fibre of the yarns or texture of the cloth, and great confidence is felt in recommending this canvass, as no expense or labour is spared to improve the quality in every process of the manufacture.

The proprietors of the above factory spun up 327,000 lbs. *Irish flax* last year; and they had a standing order for fifteen tons per month, until a short time ago, when they procured fifty tons from Russia.

✂ DISHLEY SHEEP.—Dead weights of four weather sheep, twenty-one months old, bred and fed by Mr. Charles Champion, of Blyth, Nottinghamshire, and exhibited by him at the London Christmas Cattle Show, Sadler's Yard. December 1817:

1. Carcass and head,	22 st. 4½ lbs.
Loose fat or tallow,	3 0
2. Carcass and head,	21 3
Loose fat,	2 3
3. Carcass and head,	20 1
Loose fat,	2 4
4. Carcass and head,	19 7
Loose fat,	3 1
	94 st. 7½

8 lbs. to the stone London wt. lbs. 759½ by 4, 189-3½—say 190 pounds dead weight of each sheep.

From Mr. Champion, the breeder of the above sheep, the editor of the American Farmer, has received a yearling ram and two ewes. One of the ewes, has a fine ram lamb some weeks old, and the other is expected to lamb in a few days. These sheep were imported for the sake of having the genuine race in the country, and are for sale, separately or together as may suit persons desirous of buying, and with whom it is an object to have fatter mutton at an earlier age and of greater weight—by at least 25 per cent. in all these respects, than is to be had from any other breed. They are moreover well covered with heavy fleeces of excellent wool.

Extract from Mr. Champion's letter to Mr. Skinner, 28th November 1825.

"I have selected for you two of my best ewes. They are both tupped by one of my best rams. The one year old ram is well bred, being got by a ram which was let for 100 guineas the season."

✂ Editors of papers that exchange with the American Farmer, are respectfully requested to copy the above.

LIVERPOOL, March 4th—*Latest*.—There has been a steady demand for Cotton this week, and prices have advanced 4d. per lb. Sea Island Cottons, 19½ to 27d.; Bowed, 5½ to 7½d.; New Orleans, 6½ to 10d. Alabamas, 6½ to 7d.

✂ TOBACCO.—Letters of the latest date and from the most respectable sources in Holland, contain nothing favourable for tobacco or any other article, the growth of our country. They state that the price of Maryland Tobacco was entirely nominal, no sales of any account since 25th Jan. trade generally was in a most depressed state.

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Scientific Memoranda, applicable to rural economy, continued—Agricultural Chemistry—Diseases and Accidents of Farmers, continued—Statement of Tobacco grown in Maryland from 1820 to 1826—Grazing and Sale of Cattle—Whisper to a Newly-married Pair, continued—Pedigree and performances of Eclipse, concluded—Mark Anthony, of Mr. Randolph's stud—Gracchus—Runaway Negro Law of Delaware—Flour Inspection Law of Maryland—An Act respecting last Wills and Testaments—Embarrassments of Trade in England—Board of Public Works—Franklin Journal—Patent Canvass—Dishley Sheep—Editorial

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETA.
		from	to	
BEEF, Baltimore Prime,	bbl.	8		
BACON, and Hams,	lb.	7	8 8	11
BEEF-WAX, Am. yellow	—	33	34	40
COFFEE, Java,	—	17	18	22
Havana,	—	15	17	18
COTTON, Louisiana, &c.	—	14	16	
Georgia Upland,	—	12	14½	
COTTON YARN, No. 10,	—	33		
An advance of 1 cent each number to No. 18	—			
CANDLES, Mould,	—	12		14
Dipt,	—	10		
CHEESE,	—	8	10	12
FEATHERS, Live,	—	32	33	37
FISH, Herrings, Sus.	bbl.	2 50		
Shad, trimmed,	—	6		8
FLAXSEED, Rough,	bush	85	1 00	87½
FLOUR, Superfine, city,	bbl.	4 00	4 25	5 00
Fine,	—	4		
Susquehanna, superfi.	—	4		4 25
FLAX,	lb.	9	11	
GUNPOWDER, Balti.	25 lb	5 00		5 50
GRAIN, Indian Corn,	bush	68	70	
Wheat, Family Flour,	—	80	85	
do. Lawler,	—	65	70	
do. Red,	—	78	82	
do. White Flint,	—	2 00		
Rye,	—	65	70	
Barley,	—	80		
Clover Seed, Red	bush	3 87½	4 25	4 75
Ruta Baga Seed,	lb.	1		
Orchard Grass Seed,	bush	1 75		2 00
Mangel Wurtzel Seed,	—	1 25		1 50
Timothy Seed,	—	1 50	2 00	2 50
Oats,	—	45		50
Beans, White,	—	1 50	1 62	1 75
HEMP, Russia, clean,	ton	215	220	
Do. Country	—	120	130	
HOPS,	lb.	25		37
HOGS' LARD,	—	8	8½	
LEATHER, Seal, best,	—	24	25	62
MOLASSES, sugar-house	gal.	45		
Havana, 1st qual.	—	26	26½	37½
NAILS, 6x20d.	lb.	6½		9
NAVAL STORES, Tar,	bbl.	1 27	1 50	
Pitch,	—	2		
Turpentine, Soft,	—	1 75	2 00	
OIL, Whale, common,	gal.	30		40
Spermaceti, winter	—	68	70	88
PORK, Baltimore Mess,	bbl	11 00	12 50	
do. Prime,	—	8 50	9 00	
PLASTER, cargo price,	ton.	4 50		
ground,	bbl.	1 50		
RICE, fresh,	lb.	3		5
SOAP, Baltimore White,	lb.	12	14	18
Brown and yellow,	—	5½	7	8
WHISKEY, 1st proof,	gal.	27½	29	38
PEACH BRANDY, 4th pr	—	75	1 00	1 25
APPLE BRANDY, 1st pr	—	35	37	50
SUGARS, Havana White,	c. lb.	13 50	15	11
do. Brown,	—	9 00	9 50	
Lo: siana,	—	7 75	9 50	10
Loaf,	lb.	19	22	20
Lump,	—	16	18	20
SPICES, Cloves,	—	70		1 00
Ginger, Ground,	—	7		12
Pepper,	—	17		25
SALT, St. Ubes,	bush	46	48	
Liverpool Blown	—	53	55	75
SHOT, Balt. all sizes,	cwt.	9 50		12 50
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50
do. Sicily,	—	1 20	1 30	2 00
Lisbon,	—	1 15	1 25	1 50
Claret,	doz.	4	8	5 00
Port, first quality,	gal.	1 50	2 00	2 50
WOOL, Merino, full bl'd	lb.	35	40	
do. crossed,	—	28	30	
Common, Country,	—	25		
Skinnners' or Pulled,	—	33	35	

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AGRICULTURE.

ON THE CULTURE OF TOBACCO.

DEAR SIR, *Highlands, March 31, 1826.*

I have received your letter of the 28th inst. asking of me a sketch of the culture and management of bright tobacco, to accompany my communication made to you on an improvement in prizing tobacco by lever. You have taxed me with a matter that could with great propriety be transferred to abler hands in my neighbourhood; whom, if we may judge by the fine specimens often exhibited by them in the market, would fairly entitle them to the credit of possessing superior knowledge in the culture and management of this article. There is, besides, such diversity of opinion as to its *proper management*, that it makes the task the more difficult. I will, however, cheerfully give you the method most approved of by me, which a few years experience has taught me to give the preference to over the old and more general practice. To make *fine* yellow tobacco it has always been found necessary to crop in new land; and to succeed then, depends entirely upon the character of the soil, which should not be too fat nor too poor. There is a medium between the two which is the best adapted to its culture, and this is to be found more in quantity on Elk Ridge and its vicinity, than in any other part of the state, and I believe I may add of the United States. I have seen some very fine tobacco from the state of Ohio; but on comparison, it will be found not to possess that soft, silky character for which our tobacco is so much admired.

Land intended for tobacco should be cleared as early in the fall and winter as possible, to give full time for clearing and preparing it well. The first consideration of the planter, then, is to prepare his tobacco beds and be *careful* in the selection of the proper kind of seed. Many kinds are used; but to make very fine tobacco, it is necessary to use seed of the light kinds; and of all these, I have found none better than the low pear tree.*

If plants are to be raised in the old fashioned way, the ground should be very well burnt, and to accomplish this in the best manner, it is desirable to burn in the fall before the ground becomes too much frozen. Let it then remain until the time arrives for sowing, when dig it up lightly; dress it fine and mix the seed with riddled leached ashes, which distributes it more regularly. There is a variety of speculation as to the proper time for sowing. Some begin as early as December, but I have drawn from a bed sowed in April before one sowed in February. I believe as sure a plan as any is to germinate the seed by placing it in a vessel with moist virgin earth, or leached ashes, tied in a loose bag, and kept in a warm cellar until it is to be sowed. But to insure having plants early, common hot beds are decidedly superior. To succeed well with a crop of fine tobacco, it is *all important* to plant early, which gives an opportunity for the plant to grow off vigorously, and to ripen in warm weather; which affords great advantage in the curing, as the temperature of the firing house can be so much easier regulated; besides much labour, as well as tobacco is saved by getting clear of what is termed "the second, or late glut of worms." Plant as soon after corn planting as possible. Have the ground well stirred by two light ploughings, and well harrowed. Experience has taught me to cultivate on a flat or even surface, in preference to planting in hills, by which I economize very much in labour. When the ground is prepared as above, I mark off the rows (one way,) with a marker, or leg of a light shovel plough, (having taken off the

shovel.) This is drawn and directed by a couple of boys, who will prepare more ground for planting in one day, than twenty men with hoes. The droppers follow the lines thus marked off. The most experienced hand takes the first row, and drops the plants in the line at the distance of 20 to 24 inches; the others follow, and are regulated in their dropping by the first row. I apprehended much irregularity in the dropping; but as it would save cross marking, I persevered, and soon found this work to progress as actively as in the old way. Like all other drill crops, the more you stir the ground the greater will be the crop. Be careful as soon as the worms make their appearance, to destroy not only all that can be found, but the eggs, which are deposited on the leaf. By this precaution much labour is saved. When the plant inclines to run to seed, which is indicated by the formation of what is termed the "button," it is time to top it; which work ought to be done in the morning, as it is then much easier broken off. There are a variety of opinions as to the proper height for topping; but I generally top off all such leaves with the button, as I know will not make crop tobacco. But there is a great deal of practical skill requisite to test this accurately; for the upper leaves of the plant grow more or less, according to the season. If late, I top low; if early and the upper leaves vigorous, I top higher. After topping, the suckers shoot out rapidly, which must be broken off; the sooner the better. When the plant is sufficiently ripe, the leaves assume a pale yellowish cast; the lower generally more so than the upper. This is an important matter for the planter to be well acquainted with; for if he cuts before the plant is fairly ripe, he will not make yellow tobacco; and if he suffers it to stand too long, he loses both in weight and quality. Many delay cutting after two-thirds and the best of the plant is ripe, for the upper leaves to change; but I have found, by experience, that we often pay very dearly for it. In dry seasons, the top leaves are generally in a green state when the rest of the plant is fully ripe. When ready to house, muster all the force at command, that the house may be filled and the fires made before the plant falls; and it should be conveyed to the house and hung up, if possible, as fast as it is cut, so that the heat therein employed to cure it, may act upon it before it begins to droop. This may appear unimportant to many, but I do consider it one of the most important secrets in the whole process. It is well known that if the heat is applied irregularly in the firing, that the plant will not cure bright. If then the plant is cut and thrown into heaps, where it will very soon begin to heat before it is conveyed to the house—which is a very common practice, it is evident that it has been exposed to that irregular heat which we endeavour so much to avoid after getting it hung up. It is this that causes the mischief so unaccountable to many. My rule is, to have the splitting,* cutting, conveying to the house, sticking, and hanging up so arranged, as to have the plant hung up soon after it is cut, and while it is in what is termed, a *strut*; and placed upon sticks so as one plant will not touch another after it falls. As soon as the house is filled, the fires are made and doors closed up, and the heat brought to about 90 of Fahrenheit, or what may be more generally understood, to that of a hot summer day. This heat is to be kept up unchanged until the tobacco generally assumes a pale yellowish cast, and the extreme points of the leaves begin to shrink, which generally takes place in about 36 to 48 hours; when the fires must be raised, and the heat gradually increased up to as high a degree as the safety of the house will admit, and so continued, without permitting the slightest diminution, until the tobacco is completely killed; which will be

about the fourth or fifth day, if the season be favourable and the tobacco ripe. But it is all-important that not only the leaf, but the *stem to its junction with the stock*, should be perfectly cured *throughout* the house; and the best way to test it is, for the owner not to trust to the opinion of his fireman but personally to inspect the outer tiers, which he can at once prove by trying the stem—which, if it should not break on bending together, is proof positive that it is not sufficiently killed; for, unless this is effected, the brightest leaf will become more or less stained by the sap exuding from the stem.

A firing-house should not be too large. The best size is 24 by 28 feet, with three tiers of scaffolding to the plate. The usual mode is, to make open wood fires and covering the lower tier of scaffolding with tobacco sticks, to check the ascent of sparks. The fires are made in slight sloping trenches, parallel to each other, and running lengthwise with the house within four or five feet of the walls. When they are first kindled up they are made into about six separate divisions; three on each side and of small compass; when the heat is to be raised these fires are gradually extended, until they form one line of fire of two divisions. Charcoal is now much used and is greatly to be preferred, both on the score of safety and interest; the tobacco by this mode being totally divested of smoke. I have myself adopted a still safer plan, which although somewhat expensive in the outset, it becomes less so in the end, by saving of fuel, risk, &c. I have had two old iron steam boilers, about 7 feet long and 24 feet diameter, converted into stoves, with pipe fixtures, which, independent of their giving security, economize vastly in the consumption of fuel. These stoves, after firing one house, may be carried off to another, which may be in readiness by the time the first is finished, by passing a long pole through the door front and pipe cap. Thatched roofs are preferred, as they permit the gradual escape of the damp atmosphere arising from the tobacco when firing. If the roof is of shingles, it would be an advantage to have an opening of an inch on the comb, which should be capped by two planks elevated an inch or two above the comb.

As soon as the tobacco is cured, it should be excluded from damp air, giving it only as much as to condition it for stripping, which should be done as soon as possible after it is cured; as the longer it is exposed to the air the more it loses its fair complexion. As it is stripped it must be tied in separate bundles, not too large, according to quality, and immediately put down into light bulk on a platform raised a few feet from the ground; on which first put a layer of long straw, then place the tobacco with the butts out and ends of the leaves just touching, without spreading open or compressing it, only observing to keep the leaves straight; lay it lightly, covering it with long straw and a few tobacco sticks, and leave it in bulk until you are prepared to qualify it, which may be done towards the close of winter, as follows: the tobacco is taken out of bulk, placed in sticks and hung up in the house until it becomes very dry, particularly the head of the bundle; care must then be taken to seize the *first* opportunity when the tobacco has become just damp enough to press in the hand without crumbling, to take it down before it gets too high, and bulk it down again in double row, to qualify it for packing; and when a bulk is considered sufficiently large, cover it with long straw, placing boards or sticks thereon, and weight it down well; for in doing this, much is gained in packing, as this tobacco will not bear heavy prizing. The tobacco soon after may be packed, taking care to lay it in the hoghead as it comes from the bulk, and placing the butts of one half of a layer opposite to the other half. The second layer in the same way, but placing the butts not on those of the first layer, but more within the hoghead, the head

*I have a small parcel at the service of any of your friends. [Too late now—we have distributed freely through the members of Congress from Ohio.]

*I greatly prefer splitting to pegging, for light tobacco.

of the butts of the second layer being placed at the foot of the butts of the first layer. This is called a *double course*. The next double course, the butts are placed at right angles to the first.

I believe I have now gone through the particulars, but have enlarged much more than I had in contemplation; I find it, however, impossible to abbreviate on a subject which is intended for instruction to the novice. I have only to ask to be excused for any imperfections in drafting this essay, and for sending you this rough original; for its length and my engagements absolutely preclude my either copying or correcting it at this time.

I am yours, very respectfully,

J. S. WILLIAMS.

[The next number of the American Farmer will contain a communication from Mr. Williams, with a diagram, explanatory of a labour-saving method, used by him with great advantage, for *prizing* to bacco.]

ON THE CULTIVATION OF MANGELWURZEL, BEETS, PARSNIPS AND CARROTS.

The three first thrive best on a deep moist sandy loam, and as these crops are becoming every year more important in field as well as garden culture, and they having long since been satisfactorily proven, not only to be very useful, but almost indispensable in keeping stock in fine condition through the winter months, when sliced and mixed with straw, draw away the necessity of hay, and works up the straw and chaff which otherwise would have to be thrown into the manure yard, and which, when given to stock without roots, bind their bowels, and leave them in a very unthrifty state, which is effectually corrected by the mixture of roots, and will also fatten them with the addition of a small portion of meal.

My method of cultivating these roots is as follows: for these crops choose land which has had some previous mellowing crops, such as corn, potatoes, clover of one year's standing, &c. plough the ground in the fall or winter, in the following manner: with two horses plough a narrow furrow as deep as they can, then let a second two horse team follow the first plough in its furrow, with what we call a subsoil plough, which loosens and pulverizes the subsoil in the bottom of each furrow to the depth of six or eight inches more, and leaves the pulverized subsoil to be covered by the next furrow of the two horse plough, and so on leaving the good soil on top, and mellow to the depth of 12 or 14 inches, which is absolutely necessary to the production of those tap-rooted vegetables; in the spring, as early as the ground is dry, cross-plough in the same manner as above, then spread on a good coat of well rotted manure, and plough it in 4 inches deep, and harrow or scarify until the ground is fine. I then proceed to lay out the drills two feet apart by means of an instrument made as follows: take a piece of oak scantling 4 by 4 inches, 7 feet long, into which bore 4 holes 2 feet apart, commencing 6 inches from the end, with a two inch auger, into which drive strong pointed pins 7 inches long, (beside the part in the head) to which oak piece attach a pair of shafts and handles, and by the assistance of a horse the drills may be made of regular width and of proper depth to receive the manure and seed, and then drill in the seed, which may be performed by mixing them with sifted wood, ashes or fine manure, and drill both in together, if dropped by hand they must be covered with a mixture of well rotted manure and fine soil from the woods, both which will prevent the growth of the young plants, as soon as they come up: weeds will then appear and must be pulled in a red earth. The plants must be kept clear of weeds and grass, and the soil must be kept in a red earth.

thinned to six inches, carrots to three inches, mangel wurzel to twelve inches apart in the rows. Next dressing may be performed by a small cultivator, and the last one may and ought to be done to the depth of 6 or 8 inches, by the subsoil plough, running it as near the rows of plants as possible without disturbing their roots, by which means the congealing effects of droughts is prevented, by keeping the ground in fine mellow tilth all the dry season; by giving them the finishing hoeing and cleansing after the subsoil plough the crop is made; in this way root crops may be raised in great quantities, and at a very small expense, compared with the usual garden methods.

ROBERT SINCLAIR.

ON DISEASES AND ACCIDENTS OF FARMERS.

Observations on the means of preventing and relieving the accidents and diseases, to which farmers are particularly subject. By JAMES MEASE, M. D.

[From the Memoirs of the Philadelphia Society for promoting Agriculture—Read May, June, July, August, 1825.]

[Continued from p. 19.]

Biles.—These are occasioned either by constitutional or local causes. When they are numerous, they are very generally attributed to grossness of the system, or in popular language, to "too rich blood." They do indeed occur sometimes in persons of gross habits, but they also very commonly attack others, who have been debilitated by previous diseases, particularly fevers and dysentery. When purges have been omitted to be given after the small pox, cow pox or measles, they almost invariably occur. When they succeed a general disease, they are commonly, but erroneously supposed to be critical, or to be the deposit of the original cause of the complaint, or the last effort of the system, or of "nature," to terminate a previous disease. They are therefore deemed healthful, and much unnecessary suffering is often occasioned by neglecting them.

The local causes of biles are picking off the heads of little pimples, or irritating a scratch or wound made by a knife or pointed instrument. They also often happen without any obvious cause.

It is difficult to disperse a genuine *furunculus* or bile, unless it be early attended to. When, however, they attack a joint, or appear in any part of the body which it will be troublesome to attend to, the experiment ought to be made, by the application of three or four leeches, and of a thin cloth dipped in cold lead water to the part, and by taking one or more purges; but when it is evident that a disposition prevails in the part to suppurate, poultices of flax seed, or of bread and milk, covered with oil or hogs' fat, ought to be applied and renewed twice a day. If great pain attend, a tea-spoonful or two of laudanum may be poured over the poultice. Much pain arising from the distension of the skin may be prevented, and the course of the disease shortened, by a free and early opening of the bile, to discharge the purulent collection and the gangrenous cellular membrane, commonly called the *core*. When from fear of a little momentary acute pain caused by the use of a lancet, the sufferer delays the operation, or permits the bile to break spontaneously, or will consent only to a small opening, the disease often extends, or a fresh collection of pus takes place. After opening the bile continue the poultices until the cavity of the bile is emptied, and after the second day, insert a tent of soft oiled linen, (twisted or rolled to a point,) in the wound, to prevent its too early reunion. This must be removed every dressing, and the matter gently pressed out. When the cavity is empty, the wound may be dressed with the oiled linen, and the matter gently pressed out.

ointment on a soft rag. When a disposition to form biles appears, they may be prevented by taking a mixture of cream of tartar, and flowers of sulphur,* and by drinking freely of an infusion of sassafras blossoms, or root of dandelion.

Burns and Scalds.—When these are of small extent, ease may be speedily obtained by the application of cold water, of such a temperature as is adequate to the intended object. It is to be renewed as often as is requisite to allay the pain. If the part scalded be the foot or leg, and covered with a stocking, it should be instantaneously pulled off; but if only a minute or two have elapsed after the accident, before any attempt is made to afford relief, the stocking should be cut away; as in the attempt to pull it off the cuticle will come with it, and greatly increase the anguish by the exposure of the true skin to the air. Ice must not be added to the water, for by the sudden abstraction of the heat of the part, it will cause pain. After the severity of the pain has been allayed, the part may be bathed with a thin rag, dipped in cold lead water and then covered with Jamestown weed ointment. If blisters form, they should be opened by a needle or a very small puncture of a lancet, to let out the water contained in them. Preserve the old skin to defend the part from the irritation of the air, while the new skin is forming.

If the burn or scald happen in winter, or be extensive, the application of cold water would create a chilliness, which is to be carefully avoided. In this case the part may be wrapped up in cotton, and permitted to remain on until ease be obtained: it should then be moistened and gradually removed, and the part covered with the above ointment, or one of bees' wax and oil, and washed every day with a solution of white vitriol and water in the proportion of twenty grains to a pint of water.

Hydrophobia.—The disease produced by the bite of a dog, wolf, fox, or cat when mad.

Every person who keeps a dog is liable to this disease, and not a year passes without the publication of the accounts of deaths from it. To guard against it let the following cautions be attended to: avoid all intercourse with strange dogs or cats. These animals when infected, often bite without provocation, and without exhibiting the least symptom of disease. A bite received from one of these animals, whether young or old, in the first hour of the disease, and however small, is equally dangerous as a large one, or one inflicted when at its height: nay, cases related on most respectable authority have occurred in the United States, and in other countries, of the disease and death being produced by bites from dogs while the dogs themselves continued in good health.

In case of a wound being received, it should be instantly wiped, and washed with soap and water, and then well sucked, either by the sufferer himself or another person. There is not the smallest danger in thus applying the saliva of a dog to a sound mouth, for a wound or a sore are essentially necessary to give activity to the poison. If the wound be large, water should be poured from a tea kettle

* Take of cream of tartar one ounce, flowers of sulphur half an ounce, molasses, or honey, if preferred enough to combine the ingredients. Mix thoroughly and take a table-spoonful, three times a day, washing down with the drinks above prescribed, or water.

† Corruptly called "Jimson weed." It is the *Datura Stramonium* of the botanists. The ointment is made by mixing the juice of the plant with melted hogs' fat; or the leaves pounded in a mortar, may be boiled with the fat, and then strained.

‡ See the Med. Recorder for the August 2d, 1825, any paper on this disease. In two of these cases, it is not mentioned whether the dogs, at the time they bit the person, exhibited any marks of indisposition. On the 14th of August the last appearance of the disease was

on it for half an hour, and the edges of the wound opened, to give free admission to it: and in every case ley of wood ashes, or a solution of potash in water must be afterwards used as a wash. Mercurial ointment should then be rubbed in the wound, which must be prevented from healing for two weeks. The application of caustics to the wound has repeatedly failed to prevent the disease. If a skilful surgeon be at hand, and the part bitten admit of the operation, it should be cut out, which will effectually secure the sufferer from all danger of future disease. But the surgeon should take care, that he do not inoculate with his knife the parts below the extent of the wound. After the first incision, therefore, a clean knife should be used.

It may be satisfactory to know that not more than one in twelve persons bitten, are attacked by the disease; but this fact must not cause the neglect of the local means mentioned, for in the United States every case that has occurred has proved fatal. Wounds received through clothes are much less dangerous than those inflicted upon the bare skin, as the poisonous saliva in the former case, would be probably wiped off from the teeth.

In the event of the disease appearing, not a moment should be lost in consulting a physician; and the treatment I advise, is to bleed the patient while standing or sitting up, until fainting is produced; and if the symptoms recur the operation must be repeated, and to the same extent. The temporary exhaustion from the loss of blood will soon be recovered from, while death will be the inevitable result of any other known treatment. I do not promise a cure from the bleeding, but it has succeeded in two cases; one in Calcutta and one in England; and these warrant the use of it, considering the total failure of all other remedies hitherto tried. It is essential that the blood be lost in the course of the two first days of the disease.* Dogs should be carefully prevented from eating carrion of any kind. The sufferer is earnestly entreated not to trifle with his life by trusting to any of the numerous specifics with which the public have at different times been duped. Their recorded failures prove that they do not possess the power of either preventing or curing the disease. As regards a cure, they make no pretensions; their boasted success is confined solely to prevention; but it is a well established fact, that as many persons who took no remedy have escaped, as those who have undergone a long course of preventive medicines. Even a salivation, long continued, has repeatedly failed.

(To be continued.)

ON THE CULTIVATION OF MADDER.

(From the New York Statesman.)

As manufactures progress, many agricultural products will be brought into demand, which, from the variety of our soil and climate, may as well be raised in this country, as in any other; and it is the interest of our agriculturists to seize every opportunity of cultivating new products, as soon as a sufficient demand is created to warrant the attempt.

Madder has become an article of great consumption, and the demand is daily increasing. That it can be raised in most parts of North America, in the greatest perfection, has been tested by experience. Mrs. Madison made a report to the Philosophical Society of Philadelphia, many years since, of madder raised under her direction, and the report was accompanied with a sample of cotton dyed on Adrianople red, that has never been exceeded in colour by any European dyer. In Kentucky,

madder is commonly raised in gardens; is dried in the root, and sent to market for sale. I once used a few pounds of those roots, and the colour obtained was equal to that produced from the second quality Dutch grapp.

D. Ambourney informs us that the roots taken from the ground and washed, will, by using four pounds for one, produce all the effect of the best prepared. This fact is highly important to manufacturers, as it points out to them an easy and cheap way of supplying the article for their own consumption. They need only enclose a piece of ground of sufficient extent to plant a small quantity at first, and by transplanting from these every year, they can, taking them up as they want them, obtain the requisite supply at half the price they now pay.

I have selected information relative to the cultivation of madder, which I request you, Messrs. Editors, to publish, for the guidance of those who may wish to make the attempt. Roots will be supplied, or information given where they can be obtained, by Wm. Partridge, 45, Fulton-street. Those gentlemen who may be desirous of obtaining roots, will please give early notice of the intention. In due time I shall give the necessary information of the processes of dyeing, grinding, and putting the article up for distant markets.

"It will be necessary to plough the land deeply for madder, before the winter, into high ridges, in order that it may be exposed to the action and influence of the frosts and the atmosphere. Early in the spring these ridges should be well harrowed down by a heavy long tined harrow, and then ploughed again in the contrary direction to a good depth. And when after this the land is not perfectly clean from weeds, or not rendered sufficiently fine and mellow, another ploughing and harrowing should be given. In the last operations the ground should always be left in as level and even a state as possible. It is then ready for the reception of the plants. The sets or plants may then be obtained either by sowing the seeds upon a bed of earth which is rich, and made perfectly fine by digging and raking in the spring, and then lightly covering in; or from offsets or suckers from the old plants. In the first method, on the plants appearing they should be made perfectly clean by weeding, and to be set out at the distance of three inches in the beds by the hoe. In this way, by keeping the ground quite clean and well stirred about the plants, they will be ready to set out in the second autumn; though it will be mostly better to defer the business till spring. It requires about thirty thousand plants for setting an acre of land. The most suitable time for taking the sets is shown by the plants having attained the height of ten or twelve inches from the ground, and the suckers having thrown out fibrous roots from their bottoms. This may be seen by drawing up a few of the plants, and usually about the latter end of May or beginning of June. Besides it is necessary that the sets have formed root-fibres at the bottom, before they are removed, as where that is not the case they never succeed well. The land being prepared as directed and the plants provided, a sufficient number of labourers are to be employed, that the work may be performed as expeditiously as possible. In taking off the sets much care is necessary not to injure them. The number of plants that can be set in a short time should be taken up at once. They should be prepared by having a third part of their tops cut off; a sort of thin batter should be made by mixing good vegetable mould and water well together, into which the roots of the sets should be well dipped before they are placed into the earth, as by this means the necessity of watering the plants afterwards is prevented. This work is executed by a person before the planting commences. Two others are employed afterwards in distributing the plants so as to be convenient for putting them into the ground.

"These sets, after the land has been formed into beds, 5 feet in breadth, with 2 feet between each for intervals, are put in by means of a line and a dibble, beginning at a distance of six inches from the outside and setting a row of plants at a distance of five, six, or more inches from each other; then removing the line two feet further on them, and putting in another row, and so on, till the bed is finished. In this way each bed contains three rows of plants at two feet distance each.

"As some of the plants are liable to die soon after the work has been performed, it is necessary, in the course of two or three weeks, to look over the ground and put fresh vigorous plants in the places where the others have been destroyed.

"It is of the greatest consequence to the crop that it be kept perfectly clean; and that the mould be occasionally stirred about the roots of the plants."

HOPSON.

PROSPECT OF CROPS.

Extract of a letter to the Editor, dated Lewisberry, Pennsylvania, March 27, 1826.

"Our crops of wheat and rye in this part of the country are very promising. The present month has been, so far, very favourable; but the months of January and February were so severe, at times, as to have destroyed the most of our peaches—indeed, except where the trees were sheltered from the north-west and north wind, there is scarcely an embryo peach to be found uninjured! Trees situated on high grounds did not escape, as is frequently the case where fruit is injured by frost."

HORTICULTURE.

GOOSEBERRIES.

[There is scarcely an old garden to be seen which has not some squares in it incumbered with gooseberries and currant bushes—we say incumbered, because, how are they managed? Of what utility are they? How much fruit do they yield? It is true we sometimes get a gooseberry pie, which is very nice, but so great is the quantity of sugar used in making it, that, like the Indian's gun, it costs more than it comes to. But the defect to which we would advert, for the sake of reprobating it, is the too prevalent custom of *planting* good fruit and then leaving it to its own fate. The gooseberry bush is never pruned and trimmed, and scarcely ever even weeded; and were it not for its extreme hardness, it would perish as does a plant of corn or cotton, when left without culture to struggle for itself. As it is, though our gooseberry bushes may live, they get so clustered with wood as to exclude light and air, and yield nothing but diminutive sour green berries. People generally, really appear not even to know, that with a little care and attention, they might supply their tables with an abundance of delicious wholesome fruit, eatable with great pleasure in its natural state. They have no idea that their tables in season might be supplied with plates of this fruit as large as the end of a miller's thumb. They are not aware that in a climate not more congenial than ours, culture has produced 200 sorts of red, yellow, green and white gooseberries. There are very few, at least within the range of our acquaintance who know how to esteem this valuable fruit. From the gardens of Major M'Kim, and friend P. E. Thomas, the latter of whom has himself imported 60 kinds—we have seen gooseberries so large and so superior to those commonly to be seen, that we are sure that many people would not readily know what to call them; but they know the value of an axiom that every man, whether farmer or merchant, ought to adopt, to wit:—What you do undertake, be careful to execute

* Physicians are referred to the "Medical Recorder of Philadelphia," vol. 2d, pp. 174, 285; and vol. 6, p. 35, for the cases cured by bleeding, and my remarks thereon. The particulars of any case in which this treatment shall have been adopted, with or without success, will be acceptable to the author.

in the best manner. If you go to the expense and labour of rearing or keeping a horse, let it be one of good blood and action, and be well kept. If you keep but one cow, let her be well kept and a good one at the pail. If you build a mill, let it be one of best materials and construction, with power most skilfully applied.—So if you plant but one fruit tree, or one gooseberry bush; bestow your time and care on one of good kind, let it be well kept, cultivated, pruned, &c. It will then give you the best return, and do you credit besides; which are, after all, the only rational objects of undertaking any thing. But here you are, say our readers, writing us a grave scolding lecture on gooseberry bushes! do you take us all for geese? No! a good sermon may be preached from a short text. The most sublime and eloquent to which we ever listened, was by Mr. Everett, the member of Congress, on "Brethren the time is short;" and though perhaps quite as long, yet to his delighted audience, it seemed as did Reuben Butler's ordination sermon to David Deans, "a short allowance of spiritual provender." However that's not "germain to the matter." To return to the gooseberries, those who would have them or any other berries, should take care of them, or dig them up and plant cabbages in their place: those who would cultivate them and wish for instruction may read the following:—

Concise and practical treatise on the growth and culture of the Gooseberry: including a catalogue of the finest and most esteemed varieties that are now cultivated. By R. F. D. Levington.

[Communicated for the American Farmer.]

The following treatise is confined entirely to the propagation, cultivation, and general management of the gooseberry, from its earliest state to its last stage of profitable vegetation; and shews that management, in as brief and comprehensible a manner as possible. The writer is himself a practical gardener, and is impressed with a belief, that his long practice and experience in the profession, will render this work the less liable to error.

ON SEEDLINGS THE FIRST YEAR.

The method of raising gooseberries from seed is chiefly practised by amateurs, whose ambition incites them to the pleasure of giving a name to a fine new sort (which they may have the good fortune to raise) or to the hopes of gaining a prize at the gooseberry shows, of which they may be members.

Being in possession of a quantity of seed, about the month of February or March, is a good time to begin sowing. Prepare a nice bit of light ground, by manuring and digging it well according to its quality.

When it is thus prepared to the extent required, line it off into beds of four feet wide, allotting two spare feet between each bed, for the alleys, and with a wooden headed or cullin rake, and standing at one side of the bed, draw and push the back of the rake, evenly from one side of the bed to the other, moving the surface about one or two inches deep; lay it up in a ridge at the extremity of each side of the bed, in as neat and even a manner as possible.

Sow the seeds regularly therein, between the two ridges, and give it a gentle clap down, with the back of the spade; then again with the front and back of the rake, draw back the surface earth regularly over the seeds, and cover them equally about one inch deep, with the lightest and driest of the mould.

They will soon begin to germinate, and appear above the surface, when they will require to be kept clear of weeds, and gently watered if dry hot weather, and on a light dry soil, which will greatly forward their growth; when they arrive at about two, three, or four inches in height, they will require to be thinned out, to about six or eight inches

apart in the bed, and kept clear of weeds, and should be watered when required, until winter.

ON SEEDLINGS THE SECOND YEAR.

Any time between the fall of the leaf in autumn, and the rise of the sap in spring, get a plot of light ground prepared for the reception of the seedling plants, which having finished to the extent required, begin taking up the plants from the seed bed, (both large and small, for if they have done well they will now be tolerably well rooted plants, but if otherwise, let them remain in the beds another year, and then follow the same directions as are here given,) and prune them up to a clear stem of from twelve to eighteen inches in height, leaving only three, four, or five buds or eyes, at the top of the stem, to form the head or bush.

Plant them in the ground already prepared for them, at about fifteen inches apart in the row and twenty inches apart between the rows, and if dry weather at the time, give them a little water to settle the earth about their roots.

If dry weather continues, they will require gentle watering to be given them frequently, in order to facilitate their vegetation.

Keep them clear of weeds, and go over them at different times in the course of the spring and summer, and displace any suckers arising from the roots or laterals from the stems.

ON SEEDLINGS THE THIRD YEAR.

During the last summer's growth, the young bushes (if healthy,) will have made considerable good shoots, which it is advisable to let remain entire, unless they are too thick of laterals, and those growing irregularly across one another, when it will on such occasions be proper that they be cut off close to the main shoots.

As the gooseberry bears its fruit principally on the young shoots of last summer's growth, that wood is now to be left entire, as there will be a likelihood of the plants having some fruit on the ensuing season, which may be depended upon as a true specimen of its future produce.

Those berries which prove to be bad sorts, and not worthy of any further trial, cannot be eradicated too soon from the ground, which will afford more room and nourishment for those that are found worthy to remain.

But if it should so happen that the season be wet, or the bush not in a good state of health, it may not bear any fruit this year, or not being perfectly healthy, and the season unfavourable for ripening and bringing fruits to maturity, may produce an imperfect berry; the bush on such occasions is not to be condemned, until it has a more favourable chance of proving itself another year.

For the pruning and forming the proper bush, see the head, *Pruning and Training*.

ON CUTTINGS THE FIRST YEAR.

This mode of cultivation is by all practical authority in the greatest repute and practice in the propagation of gooseberries; as experience teaches us that it is attended with the greatest share of success, for reasons which I will explain; in the first place, the plant from a cutting, comes sooner to a bearing state, and with less trouble than in any other mode; secondly, as you will probably be acquainted with the kind or kinds you intend to cultivate, or of the description which you have with or of them, you can then judge if they are what you want, and can depend upon, and if so, you can then look forward with a greater certainty of success to your labours.

I consider about the month of February or March, to be the best time for this work to be done, though nevertheless any time from the fall to the rise of the sap is attended with success, providing that the weather is open and dry at the time.

Choose the cuttings from the most healthy and

fruitful bushes, and let them be well ripened strong shoots of last summer's growth. I never prefer the most luxuriant shoots, but rather those of a middling degree of growth.

Take the shoots off at the bottom joint and keep each sort by itself, tied up in small parcels, with strands of bass matting, until the next operation, which if not convenient at this time, they must be put about half their length in the ground, where they will keep with safety for a considerable time, according to the advancement of the season.

Prepare the cuttings by pruning off neat and closely under the protuberant part of the lower joint, cut the top off, allowing the cutting to be left at from twelve to eighteen inches in length, and rub off all the buds or eyes, to about four, five, or six at top, which will remain to form the head or bush.

Having the ground ready for their reception, lay the line across, and with a dibble, plant them at from four to six inches deep, and at from six to nine inches apart in the rows, and at from twelve to eighteen inches between the rows, and give them a gentle watering when required in dry weather, keep them clear of weeds, &c.

ON CUTTINGS THE SECOND YEAR.

Prune them up to a compact formed head, which should be supported at the top of a clear stem, about twelve or fifteen inches from the surface, the top to consist of three, four, or five shoots, according to their strength, and prune them back to within two, three, or four inches of the stem, observing the above rule.

Having thus finished the pruning, &c. clear away the cuttings, and if required give a light sprinkling of well incorporated rotten manure, and dig it carefully in between the rows, with light spit laid up rough; keep them gently watered, and carefully cleared during the spring and summer, which will be all they require till their final transplantation in the following season.

ON SOILS AND MANURES.

The soil best adapted to gooseberries, is a light sandy loam of considerable texture or cohesiveness, of at least twelve inches deep, over a sub-soil of pure gravel, soft clay, or dry sand, though nevertheless they are found in great vigour of growth and health in many different soils; but if the bottom is wet, and the sub-soil a retentive clay, iron gravel, &c. little good can be looked for, though the upper soil be ever so good.

It is in vain to attempt the rearing of a plantation of gooseberries, where the bottom is not either dry by nature, or otherwise previously rendered so by draining.

I come now to the preparing of ground: of whatever texture or disposition the soil of a plantation is, it should be trenched at least two spit deep, and strongly manured with composts or simple manure according to the nature of the soil, which if of a light disposition, is to be manured with cow-dung, pond-mud, scourings of dishes, sprats, sea-ware, &c. if of a cold heavy nature, it is to be manured with horse-dung, pigeon-dung, soot, ashes, &c.; all of which are either to be used in composts, or as simples; but composts are to be preferred.

If the new plantation ground be taken in from pasture, it is proper that it be trenched full three spit deep, laying the top turf upside down, at the bottom of the trench.

ON PLANTING.

Having the ground prepared, stretch out the line, at from five to seven feet apart, according to the texture of the soil, (that is at five feet in bad soil, and seven in that of superior quality) and make marks at opposite distances along the line, in a sort of diamonded manner, or as it is termed in the garden, zig-zagged; at every mark dig the pit large

and deep enough for the root to lay out at full length, without being confined or cramped.

Proceed to plant the bushes in an upright manner, and not deeper than just to cover the top part of the roots, about two inches below the surface, taking care to shake the plant regularly as the mould is falling round the roots, that it may completely surround them, and place them in a sound proper bed, giving them a gentle tread with your foot, and a little water if required to moisten the mould.

ON PRUNING AND TRAINING.

In a new plantation of gooseberries, great care must be observed with respect to the proper form of the bushes, the shape of which should be similar to that of a common shaped basin.

The gooseberry produces its fruit both on the young wood, and on the spurs of several year's branches; but the fruit on the former is much more preferable.

Therefore, encouragement is to be given to the young shoots as much as possible; keep the centre clear of shoots and all other wood, and shape the bush regularly round, filling up the sides with as much young wood, and fruitful spurs as possible, left at regular distances.

In the general winter's pruning, be careful to select the most fruitful young shoots which are not the most luxuriant, but rather those of a middling degree of growth.

Allow them to remain at about six or eight inches apart at the top, or extremities of the young wood, that they may not remain too crowded, which would only serve to prevent the maturing of the fruit.

But if the bush is allowed to run up filled with wood in the centre, keep them as thin of branches of old wood as possible, with which view you will now prune out all old worn-out and cross placed wood, or any coarse naked old branches, retaining young wood where necessary to fill up their places; and cut out all the over-abundant lateral shoots of last summer close to the old wood.

When any of the branches are too long and rambling, cut such down to some convenient lateral shoot, &c. to remain for a temporal leader, and on all occasions in this pruning, be sure to leave the young shoots at full length, unless it be those of a rambling disposition, and then merely to keep them slightly, for by cutting the tops off the leading shoots, it only encourages a profusion of unnecessary young wood to spring forth, and in consequence of which, the fruit will be much smaller; being too full of wood greatly excludes the free air, and reviving sun, from ripening the fruit early or well, and also renders it more troublesome to gather.

The weeping sorts when heavy laden with fruit, suffer much injury by the branches dragging on the ground, but to prevent this, a hoop should be fastened to stakes or posts driven into the ground, and at the distance of a foot from it, to which the branches should be dressed.

ON TRAINING TO THE WALL, &c.

Gooseberries do well trained against walls, pales, &c. the proper kinds for this purpose are the largest, finest, and most early sorts, of different colours, such as the Crown-bob, Huntsman, Top-sawyer, red-berries; Nelson's-waves, Viper, Rock-wood, yellow-berries; Ocean, Laurel, Independent, green-berries; Smiling-beauty, Wellington's-glory, Thrasher, white-berries, and such other fine sorts.

Plant them about six feet apart, along a wall, pale, &c. in an open situation, where they can have the full benefit of the sun and air; but if there is not a low wall in a good situation about the premises, they may be introduced into vacant spaces, at the under parts of the wall, such as between rider trees, &c. at your own discretion.

Train them to the wall, &c. in a fan-shaped position; keep them regularly pruned and dressed to the wall, pale, &c. and in every winter's pruning,

observe to cut out all old wood, and retain as much of the young as is necessary, laying in the young shoots at full length, and at regular distances from each other.

Look over them at different times during the spring and summer, and remove a great portion of the over-abundant young wood, and nail in the remainder, that they may not shade the advancing fruit.

Give them gentle waterings in hot dry weather during the summer, until within about a fortnight of the fruit being ripe, after which, the less moisture they have the better it will be for the flavour of the fruit.

By attention to the above hints, you may have gooseberries much earlier, larger, and of superior flavour to those in the open ground, which is a considerable advantage at an early period of the season.

(To be continued.)

FARINA.

Oxford, March 1, 1826.

DEAR SIR,

As there has been some contention (or difference of opinion) in your valuable work, about the effect Farina has on Fruit Trees, I beg leave to give you the result of my experience on that score—say 20 years. As to vegetables, I suppose no dispute can arise, as almost every farmer and gardener knows they will depreciate, &c. but let it be well understood, that when any two fruit trees of the same species unite together, or within a few feet of each other, should it so happen that they get in full bloom at the same time, one will alter the fruit of the other; and sometimes may alter it for the better, but generally for the worse, and commonly depreciate it very much; but if they do not bloom within one or two days of the same time, it will have no effect. My grapes that run together have not the least alteration when they do not bloom nearly at the same time: and some few vines blooming at the same time, have the fruit altered, even when not mixed together, by winds, bees, &c. To prove the above, I beg leave to mention the following fact, with a hope that it may be useful to some people, viz: I budded some limbs of the white Bergamot Peach, with buds of the Indian Blood Peach, from the Cherokee nation. The white peaches have a few red streaks in them, but not materially injured; but the blood peaches are reduced in flavour and beauty and full of white streaks, and will plainly show all who view them that they are absolutely mixed, and do not appear to be the Indian peach. I also beg leave to caution those gentlemen that raise fine pears, not to have quince trees within 50 yards of them, for they are apt to blossom about the same time, and no doubt but will give the pears a rough taste; and if you cut off a limb of a tree in full bloom, and dash it in the blossoms of a tree of the same species, when it is also in full bloom, it will alter the fruit; and the pound pear may be reduced in size, and increased in flavour by the same experiment.

The cause why I now give you this statement is, that people may now look out and see it, as the trees are about to bloom, and appear to have a flattering prospect.

I am, dear sir, yours respectfully,

JOHN WILLIS.

HOPS.

We understand, says the Salem Observer, the several farmers, in the county of Middlesex, intend, this season, to appropriate all their land to the growth of hops, in consequence of the great demand for them. Several of them have already contracted to deliver large quantities of hops at New York and Philadelphia. The whole number of acres, under hop cultivation, in England, last year, was fifty-six thousand seven hundred and eighteen.

INTERNAL IMPROVEMENT.

ANNUAL REPORT OF THE CANAL COMMISSIONERS.

[The following extract from the Annual Report of the New York Canal Commissioners, will be found highly illustrative of the magnitude of the work, and its prodigious efficacy in augmenting the prosperity of the whole state. The revenue arising from the canal will speedily discharge the entire debt incurred in its construction, and produce, for the community that completed it, means amply adequate to the accomplishment of whatever else may be thought conducive to the strength or the ornament of a state, which possesses of herself, all that is necessary to constitute a great and powerful republic; unfolded and applied as her resources have been, by genius and foresight commensurate with them.]

Some would be for erecting monuments to eternalize the fame of the founders of such works; but for us, we regard the works themselves and their history, as, of all monuments, the most durable and most pervading in their influence. What, in fact, are mere piles of stone and mortar? Limited in their direct operation on the mind through the senses, perishable in their materials, and too often erected to commemorate the achievements of some unprincipled tyrant—who

"Meteor-like, flames lawless through the void;
Destroying others, by himself destroyed."

Hence we have always regarded the idea of keeping alive the memory of Washington, and a veneration for his principles by any such expedient, as truly ridiculous if not insulting. If the fame of General Washington lasts as long as the art of printing, with which it is commensurate—as long as the city that bears his name—in a word, as long as we remain a free nation, his best friends ought to be satisfied. So with all successful assertions of principles, such as are embodied in the Declaration of Independence. So with the founders of such public works as the New York canals—principles that will endure as long as the sense of right and wrong: works that we hope will last until "the waters are dried up."

ANNUAL REPORT OF THE CANAL COMMISSIONERS.

[Made to the Legislature, March 25, 1826.]

To the Legislature of the State of New York:

In obedience to the act entitled "an act respecting navigable communications between the great Western and Northern Lakes, and the Atlantic Ocean," passed 15th April, 1817, the canal commissioners report:

That the unfinished work on the Erie canal at the mountain ridge, along the Niagara river, at Black Rock, and at Buffalo, which remained at the date of our last annual report, was, with some trifling exceptions, finished in the month of October last, and on the 26th of that month, the water having been admitted into the canal from the harbour of Black Rock, the first boat ascended the magnificent locks at Lockport, and passed the deep cut through the mountain ridge into the waters of Lake Erie. The navigation, which, during the summer, had terminated in the basin at Lockport, was now extended to Black Rock and to Buffalo; and thus formed an uninterrupted navigable communication from the great western lakes to the Atlantic ocean.

The first admission of a full head of water upon the dam and pier at Black Rock, and into the canal from Buffalo to Lockport, put to the test of actual experiment, the strength and solidity of the works, the accuracy of the levels, and the practicability of

carrying through the mountain ridge a supply of water, which would be adequate to the wants of the canal, during the driest seasons. The result of this experiment was entirely satisfactory.

The navigation of the canals opened in the month of April, and terminated in December. The eastern section of the Erie canal was closed with ice some weeks before the more westerly sections were materially obstructed; this difference arises from the canal being shaded in many places by the hills, and also from the greater degree of cold which exists, at the commencement and close of the season throughout the valley of the Mohawk, than is found during the same periods of the year, in the more westerly part of the state. The ice formed more than two inches in thickness at the Schoharie creek, when there was none to impede the navigation on the middle and western sections. The northerly winds which pass over the high, cold and uncultivated country to the north of the Mohawk, produces congelation much earlier, and more intense than the same winds which pass over the Ontario, whose water imparts its higher temperature to the atmosphere. This circumstance will give to the western part of the canal an average navigation of ten or fifteen days in a year more than can be enjoyed on the eastern section, and will, with the business which is constantly accumulating upon it, shortly render indispensable, some farther improvement through the valley of the Mohawk. Fifteen thousand barrels of flour, besides many other articles, were detained in the month of December, by the ice, between Utica and the Hudson.

There has been collected from tolls on the Erie and Champlain canals the past year, the sum of five hundred and sixty-six thousand two hundred and twenty-one dollars and fifty-one cents.—Of this sum seventy-three thousand five hundred and fifty-seven dollars and twenty-eight cents, was derived from the Champlain canal.

The toll of 1824 produced the sum of three hundred and forty thousand seven hundred and sixty-one dollars and seven cents, which has been exceeded by the income of last year, by the sum of two hundred and twenty-one thousand four hundred and sixty-four dollars and forty-four cents. The extension of the canal to lake Erie, and the augmentation of business upon all parts of it, afford ground to believe, that the toll will increase at nearly the same rate the present year, and we estimate the receipts of 1826, at seven hundred and fifty thousand dollars.

If to this sum of . . . \$750,000
We add the estimated amount of . . .
The salt duty, . . . 100,000
Vendue duty, . . . 250,000

It makes the aggregate receipts . . . \$1,100,000
From this must be deducted the estimated annual expense of repairs and superintendence, . . . \$100,000
Do. do. of collecting the tolls, including pay of collectors, inspectors and clerks, and for stationery and all contingent expenses, . . . 25,000
And the annual interest on the canal debt, . . . 420,000—565,000
\$575,000

And it leaves the balance of \$575,000, from the income of the year 1826, applicable to the reduction of the principal of the debt.

The amount of money expended from the receipts of 1825, will be absorbed in the payment of damages of unsettled accounts, in the completion of the improvement on the Champlain canal, in the construction of a feeder from the Mo-

hawk river at Rome to the Erie canal, and in other necessary works upon the canals in various places.

In establishing the rates of toll, we have endeavoured to graduate them in such manner as to encourage the transportation of the ponderous productions of the country, which without such favourable discrimination, could not be taken to market, and to charge on other articles of less weight and more value, a rate somewhat proportionate to their ability to sustain it. This policy, which is favourable to the commerce of the country, will also tend, by increasing the amount of tonnage upon the canal, to augment the revenue.

The average rates of toll upon the products of the country, is something less than one cent per ton per mile, and on merchandize ascending the canals, three cents per ton per mile.

The western inland lock navigation company in 1818, charged on all property passing the locks and canals at the Little Falls, and at the German Flatts, at the rate of \$2.38 per ton, including the toll on the boat, and at the rate of \$3.37½ for passing from the Mohawk river through the canal at Rome into Wood creek, making the sum of \$5.75 per ton for passing on an artificial navigation of from ten to fifteen miles in its utmost extent.

Of the property which has descended the canals the last year, it is estimated that nearly one half of its quantity could not have been transported to market without the aid of the canals, and a low rate of toll.

The following statement of property which has passed the collector's office at West Troy, exhibits a view of all the articles which have been transported on the Erie and Champlain canals, to and from tide water, excepting the amount which has passed the sloop lock at Troy, and the quantity which may have been brought from the eastern section of the Erie canal, west of Schenectady, after the closing of the navigation by the frost.

To the Canal Commissioners of the State of New York.

GENTLEMEN—The following is a correct statement of the boats, with their freight, and rafts which have passed on the junction canal, from the 7th of April to the 12th of December, 1825, from the opening to the close of the canal.

Whole number of boats and rafts, inward and outward, . . . 13,110
Whole amount of tons inward, toward the tide-water, . . . 185,405
Whole amount do. outward, from tide-water, . . . 33,669

Total inward and outward, . . . tons. 219,074

Consisting of the following articles:

INWARD.	
Boards, plank, &c. feet	32,603,545
Timber, cubic feet	655,912
Staves 9,157,787, M.	7,631
Shingles, M.	4,262½
Wood, cords	14,069
Flour, bbls.	221,093
Ashes, bbls.	24,249
Provisions, bbls.	22,726
Salt, bbls.	20,841
Lime, bbls.	12,136
Oil, bbls.	1,309
Beer, bbls.	661
Cider, bbls.	576
Kelp, bbls.	19
Iron, including cannon, &c. tons	2,586
Domestic spirits, galls.	435,273

	tons.	cwt.
Clover and grass seeds	267	17
Wool	127	6

Gypsum	8906
Stone	2658
Sand, clay and brick	1413
Cheese	596 12
Butter, lard and tallow	640 8
Hops	207 12
Fur and peltry	148 12
Furniture	191 12
Merchandise	205 19
Non-enumerated	1945 5
Wheat, bushels	562,783
Coarse grain, do.	141,703
Flaxseed do.	4,227
Beans and peas	6,145

OUTWARD.

	tons.	cwt.
Merchandise	30,101	17
Furniture	769	9
Gypsum	973	
Stone	258	
Western salt, bbls.	7,005	
Sand and clay	455	
Non-enumerated	237	3

All of which is respectfully submitted, by your obedient servant,
JABEZ BURROWS.
West Troy, Jan. 1, 1826.

A comparative view of the transportation upon the Erie Canal, during the years 1824 and 1825, is given by the following statement from the Collector's Office at Utica.

1824.	1825.
5,264 boats were ent'd with	9,000 boats were entered with
151,718 bbls. of flour	237,124 bbls. of flour
19,140 do. provisions	18,741 do provisions
40,735 do. salt	42,808 do salt
28,251 do. ashes	24,001 do ashes
1,537 do. oil	1,186 do oil
5,573 do. water cem't	9,602 do water cem't
273,551 bushels wheat	547,497 bushels wheat
No acc't of coarse grain	29,181 do coarse grain
7,947 bushels flaxseed	2,755 do flaxseed
349,765 gals. domestic spirits	409,768 galls. domestic spirits
3,477,774 feet boards and scantling	8,667,343 feet boards and scantling
34,357 cub. feet timber	521,556 cub. feet timber
1,161,000 shingles	2,793,000 shingles
1,899,000 staves	7,721,000 staves
148,000 split lath	659,000 split lath
5,662 boxes glass	13,307 boxes glass
26 tons wool	102 tons wool
7,136 do gypsum	1,666 do U. S. nav. prop.
83 do tallow	7,949 do gypsum
255 do cheese	89 do tallow
381 do butter and lard	330 do cheese
127 do hops	542 do butter and lard
104 do fur & peltry	222 do hops
880 do household furniture	134 do fur & peltry
19,773 do merch'dize	1,208 do household goods
	22,553 do merchandise including castings, oysters, clams, and several other articles which were charged a different rate of toll in 1824.

The number of persons passing Utica in freight and packet boats during the last season has exceeded 40,000, and the number of boats, arks, and cribs, which passed the same place has been equal to forty-two for every day throughout the period of navigation.

STEPHEN VAN RENSSELAER
SAMUEL YOUNG,
HENRY SEYMOUR,
WILLIAM C. BOUCK.

March 26, 1826.

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

ON PRUDENCE AND DECORUM.

(Continued from p. 21.)

I cannot express the great dissatisfaction I feel at hearing married women laugh at and ridicule ladies who are advanced in life, and still remain single—females who probably in every respect are decidedly superior to the lady who treats them with contempt, and who perhaps remain single merely because they possess more delicacy of mind, and are not so easily pleased in the choice of a husband. Various are the causes which may occur to keep a woman single: duty, prudence, and, not unfrequently, constancy to a beloved object; while a swarm of misses, strangers to sentiment, to delicacy, and to good sense, merely from their eagerness to become wives, clasp the chain of Hymen, and inconsiderately link themselves in the same moment to matrimony and misery, in the form of some *petit maitre* or antiquated beau.

Some wives, in order to display their own superiority to their husbands, are very fond of lessening and undervaluing the merit of other wives: be above such a paltry artifice; it is both ungenerous and unprincipled.

Should you, gentle lady, be in the decline of life, allow me to bring to your recollection the emphatical address of St. Paul to aged women, where he charges them to teach the young women to be sober, to love their husbands, to love their children, to be discreet, chaste, keepers at home, good, obedient to their own husbands, that the word of God be not blasphemed. (*Tit. ii. 4, 5.*)—When the apostle speaks of keeping at home, he seems impressed with the calm, unobtrusive retirement of that domestic sphere which Providence and nature have assigned to women. Strongly, indeed, does he seem influenced by it when he says, She that liveth in pleasure is dead while she liveth. (*1 Tim. v. 6.*)

Chapter IV.

ON DOMESTIC ECONOMY.

I would recommend every woman, if possible, on her marriage, to get some yearly allowance, though ever so trifling, settled on her. Believe me, the little unavoidable demands on her husband's purse, to which a wife is so frequently compelled to have recourse, is very apt to create bickering and discord; and that at the very moment perhaps when all is peace and harmony between them: and when once good humour is put out of its way, it is not such a very easy matter, rely on it, to bring it back again to its old course.

Conscientiously manage your husband's property, and shun every approach to extravagance. The domestic economy of a family is (as an admired writer remarks) entirely a woman's province, and furnishes a variety of subjects both for good sense and good taste. The want of economy has involved thousands in misery; and in those houses where extravagance is predominant, little is beheld but disorder and confusion. Their families are, in general, as dissipated and thoughtless as themselves. Harmony and decorum, with their inseparable companions peace and happiness, are guests that find within such walls neither residence nor repose.

In regard to money matters, some wives seem to think that all is gain which they can get in any way from their husbands; without ever considering that the state of his purse is a matter of equal consequence to both.

Particularly avoid every thing like extravagance. I really think a great deal of money is frequently expended in buying things which, after a while, we find we could have very well done without. The pleasure of getting a great bargain often induces

people to part with their money; while the old adage, "Take care of *pence*, the *pounds* will take care of themselves," is either not remembered at all, or, if it does occur to the mind, is allowed to have but little influence.

Be extremely regular as to bills, payments, &c. You cannot think how much trouble may be avoided by regular weekly payments. It is sometimes very difficult to ascertain the correctness of a bill when allowed to lie over even for a month, and the delay constantly subjects you to imposition.

Much, indeed, will attention to order and regularity contribute to the comfort of your husband. Men particularly love neatness, tidiness, and method: any thing soiled or out of place discomposes them; and a littered room will often make them peevish.—Meals should always be ready at a stated hour: a little decision and firmness will soon make your servants punctual. Rise early; give your orders early; breakfast early; be ready to sit down to your work-table early. Doing much before twelve o'clock gives you a command of the day, and gets you through it with ease. But, adieu to all this order and regularity, if you are fond of lying in bed! "Eight hours sleep," say our physicians, "are quite enough;" and the woman who prefers her pillow to the numerous advantages which early rising produces, would not, I fear, have strength of mind to perform more important duties. An hour rescued from sleep does wonders, and your health is much benefited by it. How long wilt thou sleep, O sluggard? When wilt thou arise out of thy sleep? Yet a little sleep, a little slumber, a little folding of the hands to sleep: so shall thy poverty come as one that travelleth, and thy want as an armed man. (*Prov. vi. 9—11.*)

"Do not defer till to-morrow what may as well be done to-day," says the old proverb. If you have a letter to write, why not do it to-day as well as to-morrow? If you have a visit to pay, why not do it to-day as well as to-morrow? &c. &c. "To-morrow, believe me," says a most useful writer of the present day, "comes loaded with duties of its own. And when it does arrive, we always feel pleased at not having it encumbered with the business of yesterday."

Few things please a man more than seeing his wife notable and clever in the management of her household. A knowledge of cookery, as well as every other branch in housekeeping, is indispensable in a female; and a wife should always endeavour to support with equal applause the character of the lady and the housewife. "I tell you, my good madam," says a humorous character, "when your husband comes home hungry at five o'clock, he won't look very pleasant at being put off with music, sentiment, and poetry, instead of a comfortable dinner. Bless my stars! I have known some ladies, who could play a fine tol lol on the piano, talk with you all day long about poetry and history, and gabble Italian and French like a monkey; and yet if the husband of one of them asked for a beefsteak for dinner, mercy me! she doesn't know whether it should be roasted or fried, or if he wished for a venison pasty, the accomplished lady is equally ignorant whether paste be made with butter or mutton suet! I can't abide such balderdash!"

A woman should endeavour to wield her needle, and to manage her scissors, with dexterity and cleverness. This is the peculiar province of a female; great comfort and economy are derived from it; and a man is always pleased at seeing his wife thus employed. Solomon in describing an excellent woman, makes her particularly expert at her distaff and spindle. And all Homer's lovely matrons—

"Deck'd with the freshest tints of beauty's bloom,
Bend o'er the distaff, or direct the loom."

"A woman's greatest praise does certainly consist in the order and management of her family;

and when much of her time is spent in visiting and company, what but anarchy and confusion at home must be the consequence? If we could but see the inside of some fashionable houses, how much would surprise and reflection be excited! The mistress perhaps at the theatre or a card-party; servants drunken, extravagant, criminal; children receiving their very first impressions from the oaths and improper conversation of these servants! Here, meat perishing which might have fed the hungry; there, garments mouldering which might have clothed the naked: in one place, filth and nastiness concealed; in another, valuable furniture tossed about without decency and without care. No fortune can answer such immoderate expenses; no comfort can consist with so much disorder. A good woman looketh well to the ways of her household, and all her family are clothed in scarlet. (*Prov. xxi.*)

Chapter V.

ON DRESS.

Let me entreat, gentle lady, that your dress may be expressive of delicacy and purity of mind. Behold a woman in the attire of a harlot! exclaimed the wise man on beholding an indecorous dress. And surely when a woman appears in public with a bare bosom, exposure of figure, perhaps with rouged cheeks, it cannot be acting too severely to adopt the same language, and cry out in disgust, 'Behold a woman in the attire of a harlot!' What! a wife, a mother, in such a dress! O all ye feelings of virtue and propriety, rescue our matrons from the degradation! Would they but reflect for a moment, "could women in general," as Mrs. H. More says, "know what was their real interest, could they guess with what a charm even the appearance of modesty invests its possessor, they would dress decorously from mere self-love if not from principle. The designing would assume modesty as an artifice; the coquette would adopt it as an allurements; the pure as her appropriate attraction; and the voluptuous as the most infallible art of seduction."

There is not an hour in the day in which a man so much likes to see his wife dressed with neatness, as when she leaves her bed-room, and sits down to breakfast. At any other moment, vanity stimulates her efforts at the toilette, for she expects to see and to be seen; but at this retired and early hour, it is for the very sake of cleanliness, for the very sake of pleasing her husband, that she appears thus neat and nice. Some one says, "A woman should never appear untidily or badly dressed, when in the presence of her husband." While he was your lover, what a sad piece of business if he caught you dressed to disadvantage!—"O dear, there he is, and my hair all in papers; and this frightful unbecoming cap! I had no idea he would have been here so early; let me off to my toilette!" But now that he is your husband, "Dear me, what consequence? My object is gained; my efforts to win him, and all my little manoeuvres to captivate, have been successful. and it is very hard if a woman is to pass her life in endeavouring to please her husband!" I remember greatly admiring a lady who lived among the mountains, and scarcely saw any one but her husband. She was rather a plain woman; and yet when she sat to breakfast each morning, and all the day long, her extreme neatness and attention to the niceness of her appearance, made her quite an agreeable object; and her husband loved her, and would look at her with more pleasure than at a pretty woman dressed soiled and untidily: for believe me, those things (though your husband appears not to notice them, nor perhaps is he himself conscious of the cause) strongly possess the power of pleasing or displeasing.

I have a great dislike to see a woman's dress exceed the expense which I know her husband can afford. fine laces and silks and a scanty purse are ill-matched associates. When I hear a woman of small for-

tune say her pelisse or lace cap cost a large sum, I at once think it a libel not only on her understanding but her principles.

I will now conclude this subject with the apostle's sentiment, when speaking of Christian wives: Whose adorning, says he, let it not be that outward adorning of plaiting the hair, and of wearing of gold, or of putting on of apparel; but let it be the hidden man of the heart, in that which is not corruptible, even the ornament of a meek and quiet spirit, which is in the sight of God of great price. (1 Pet. iii. 1, 3, 4.) These words "a meek and quiet spirit" make at this moment a most powerful impression on my mind, and have excited the following reflections, to which, gentle lady, I beg to direct your attention.—It is not to be supposed the apostle alluded to the meek and quiet spirit which is so often produced by nature, or constitution, or perhaps by insensibility, and which costs us nothing to attain. O no! the meekness and quietness he speaks of must be the effect, not of constitution, but of principle; not of nature, but of grace. I know many women who would be gentle Pagans as well as gentle Christians; who would be meek if there was no Bible, and amiable if they were ignorant of the being of a God! And though characters of this kind are interesting and valuable for the sake of society, they are certainly not the description of females who are in the sight of God of great price. The word *quiet* has an extensive meaning, and refers not so much to *temper as resignation*. St. Peter evidently intends by this word to express a quiet acquiescence, a patient resignation, an uniform composure to the painful but inevitable evils inflicted on us by the hand of God. He refers to that calmness of spirit which is *not easily provoked, which beareth ALL things, and endureth all things*, which subdues the risings of anger and resentment, and calls down divine help to soothe the heart which nature would fain agitate and discompose. He means that *meek and quiet spirit* which bears with the perverse and unreasonable tempers of those with whom it may have to deal, and which checks at once every inclination to a fretful or an angry reply; which quells the first advances to repining, produces content in whatsoever state God has placed its possessor, and enables the person who is under its animating influence to bear all the small inferior crosses of the day with that fortitude and equanimity which is one of the distinguishing characteristics of true Christianity, and such only can be the *meek and quiet spirit* which the apostle would consider as meriting his high encomium.

(To be continued under the head of Family Duties, &c.)

MISCELLANEOUS.

CURE FOR TETTER OR RING WORM.

After I had the tetter for nearly twenty years on my hand, and had used dollars worth of celebrated tetter ointment, which took off the skin, repeatedly, without effecting a cure, a friend advised me to take some Blood Root, (called also Red Root, Indian Paint, &c.) slice it in vinegar, and afterward wash the place affected with the liquid. I suppose the vinegar extracted the strength out of the root, for in a few days the dry scurf was removed, and my diseased hand appeared as whole as the other. I could scarcely believe that a perfect cure was so speedily accomplished by this simple remedy; but as nearly two years have passed without the least appearance of its return, I need no longer doubt the fact, and for the benefit of others, I wish the value of the Red Root to be more generally known.

"It grows about a foot high in rich woodland, and flowers in April. The leaf is roundish and deeply indented, somewhat like the white oak leaves—stems naked, supporting single flowers, blossoms

white. When the fresh root, which is about the size of the little finger and blood red, is broken, a juice issues in large drops resembling blood." [Ewell's Medical Companion.

REMARKABLE STAG HUNT.

Some years since, a stag was hunted from Winfield Park, Westmoreland, until by fatigue or accident the whole pack were thrown out, except two foxhounds, bred by Lord Thanet, who continued the chase during the greatest part of the day. The stag returned to the park from whence he had been driven, and as his last effort, leaped the wall, and died as soon as he had accomplished it. One of the hounds ran to the wall, but being unable to get over it, laid down and almost immediately expired. The other hound was found dead about a half a mile from the park. They were supposed to have run not less than one hundred and twenty miles.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 14, 1826.

TRUSTEES OF THE MARYLAND AGRICULTURAL SOCIETY.—In consequence of the indisposition of Mr. Hollingsworth, at whose house a meeting of the Trustees of the Maryland Agricultural Society was to have been held yesterday, a postponement of the meeting has been rendered unavoidable. It will take place, however, at the residence of Col. N. M. Bosley, of Baltimore county, on Thursday next, 20th inst. As there are many arrangements to be made, preparatory to the approaching show, it is important that the trustees give an early and general attendance on the above named day.

The Dishley sheep advertised in the last Farmer, have been sold to Mr. John Barney of Delaware, by whom the breed will be preserved in its purity, and justice and credit will be rendered by the skilful management of these fine animals to their eminent breeder, Mr. Charles Champion.

The highly respected LINDLEY MURRAY, the author of 'English Grammar,' and many other approved works on education, died on the morning of the 23d of February, at his house at Holdgate, near York, in the 81st year of his age, and in the full possession of all his mental faculties. Mr. M. was a Quaker, and a native of Pennsylvania.

TOBACCO.—Amount of Inspections in the three State warehouses, from the 1st to the 13th of April, inclusive, 231 hhds.

IMPROVED COTTON GINS.

The subscriber, is prepared to receive orders for the manufacture in this city, of the above machines, upon an extensive scale. He has introduced into the Gins made by him all the late valuable improvements, particularly those of Dr. R. Nutt, of the State of Mississippi; and by the style and durability of the workmanship, hopes to merit extensive patronage. The Gins will be packed in boxes, and forwarded to any town in the United States.

WM. TORREY, Jr.

New York, April 8, 1826.

CONTENTS OF THIS NUMBER.

Essay on the Culture of Tobacco, by J. S. Williams—On the Cultivation of Mangel Wurzel, Beets, Parsnips, and Carrots, by Robert Sinclair—On Diseases and Accidents of Farmers; continued—On the Cultivation of Madder—Prospect of Crops—Treatise on the Growth and Culture of the Gooseberry—Culture of Hops—On the Farina of Fruit Trees—Annual Report of the New York Canal Commissioners—Whisper to a Newly married Pair, continued—Cure for Tetter or Ring Worm—Remarkable Stag Hunt—Advertisement—Editorial.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8			
BACON, and Hams, . .	lb.	5	8 9	12	
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java,	—	17	18	22	25
Havana,	—	15	17	18	20
COTTON, Louisiana, &c.	—	14	16		
Georgia Upland, . . .	—	11	12 1/2		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12		14	16
Dipt,	—	10		12 1/2	
CHEESE,	—	8	10	12	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 50			
Shad, trimmed, . . .	—	6		8	
FLAXSEED, Rough, . .	bush	75		87 1/2	
FLOUR, Superfine, city,	bbl.	4 00	4 25	5 00	6 00
Fine,	—	4			
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	68	70		
Wheat, Family Flour,	—	80	85		
do. Lawler,	—	65	70		
do. Red,	—	80	83		
Rye,	—	65	70		
Barley,	—	80			
Clover Seed, Red . . .	bush	3 87 1/2	4 25	4 75	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	1 50	2 00	2 50	
Oats,	—	43	45	50	
Beans, White,	—	1 50	1 62	1 75	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	24		37	
HOGS' LARD,	—	7	8 1/2		
LEAD, Pig	lb.	6 1/2	7		
Bar,	—	7 1/2			
LEATHER, Soal, best,	—	24	25	62	
MOLASSES, sugar-house	gal.	45		62 1/2	75
Havana, 1st qual. . .	—	26	26 1/2	37 1/2	
NAILS, 6a20d.	lb.	6 1/2		9	
NAVAL STORES, Tar, .	bbl.	1 27	1 31		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75	2 00		
OIL, Whale, common, .	gal.	30		40	
Spermaeti, winter . .	—	68	70	88	50
PORK, Baltimore Mess,	bbl	11 00	12 50		1 00
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	4 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5 1/2	7	8	12
WHISKEY, 1st proof, .	gal.	27 1/2	28 1/2	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37	50	
SUGARS, Havana White,	c. lb.	13 50	15	16	
do. Brown,	—	9 00	9 50		
Louisiana,	—	7 75	9 50	10	
Loaf,	lb.	19	22	20	23
SPICES, Cloves,	—	70		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes,	bush	46	48		
Liverpool Blown . . .	—	53	55	75	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 20	1 30	2 00	
Lisbon,	—	1 15	1 25	1 50	1 75
Claret,	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full b'd	lb.	35	40		
do. crossed,	—	28	30		
Common, Country, . .	—	25			
Skinnners' or Pulled, .	—	33	35		

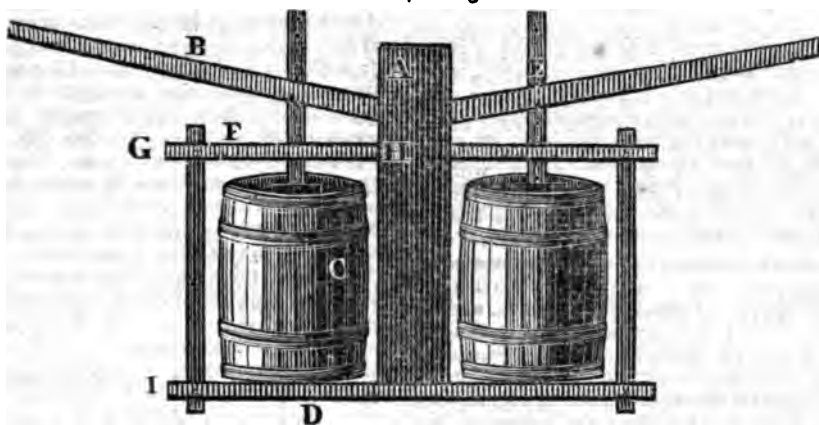
Printed every Friday, at \$5 per annum, for JOHN SKINNER, Editor, by JOHN D. FOX, corner of Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

PRIZING TOBACCO.

DEAR SIR, *Highlands, Elk Ridge, March, 1826.*

Having last year made an improvement in the method of prizing tobacco by levers, which not only facilitates the operation greatly, but dispenses with a vast deal of labour with blocks, &c., I take the liberty to send you a sketch of it for publica-



A. The post; B. the lever; C. the hogshead; D. the centre sill of the platform; E. an iron sword one inch thick, four inches wide and four feet long, perforated with inch holes at half an inch apart; F. a frame made of tough wood about three inches square, consisting of two pieces, tenanted together at G., one end entering a mortice in the post at H., the other end with a mortice to fit on a tenant made on the end of the centre sill at I. There is a mortice cut in the centre of the upper piece of this frame and also through the lever immediately over it, of just sufficient width to admit the sliding of the sword. The length of the mortice in the lever must be adapted to the movement of the sword and the lever, according as the latter is brought upon a diagonal or horizontal line, so as to admit the sword to stand perpendicular, when the lever is prized down.

It should be particularly remembered that the lever ought never to be prized below a horizontal line. When the lever is raised up for a prize, the mortice should be cut so as to allow the upper end of the sword to project forward from the post, and in advance of a perpendicular line a few inches.

The mortice (if it may be so termed,) in the frame, is cut forward of the centre, and then entirely through the piece to the mortice in the post. The object of this is to allow the frame to be removed when it is necessary to fill up the hogshead,

tion, that those who may consider the advantage of sufficient consequence, may avail themselves of it if they think proper. The value of this method is considerably enhanced by having two prize levers connected with one post, in the centre, so that two hogsheads can be packing at the same time; when the hands employed at this work can always be engaged at one or the other. As I have not an opportunity of drawing it to a scale, I must give you a rough draft of it.

or to shift it to the hogshead on the opposite side, without having to draw up the sword. The false head should be at least 1½ inches oak, with a flat piece of iron, a little dished in the centre, laid on it, to receive the blunt point of the sword. When the lever is raised for prizing, an iron pin must be placed in one of the holes of the sword immediately under the lever; after it is prized down to a horizontal line, another iron pin is to be inserted in one of the holes in the sword, directly under the mortice in the frame, which secures the pressure made until the lever is again drawn up and another prize made, when the frame pin is again placed close under the mortice. The prizing is thus continued until the tobacco is sufficiently pressed, when the hands leave it to settle, and go to work on the other hogshead.

I am aware of the great difficulty in making the explanation sufficiently intelligible, and must leave such parts of it as cannot be minutely described, to the discernment of the reader; or will take pleasure in showing mine to any person who may wish to see it.

Yours, respectfully,

J. S. WILLIAMS.

P. S. The under part of the mortice in the lever should be shod with an iron plate of ½ inch thickness, and to fit close to the mortice, (to prevent its being cut by the pin,) and a little indented on each side, to confine the pin to one place.

THE HAINAULT SCYTHE.

[From an esteemed friend, (not a practical agriculturist,) we received a number of the Northern Whig, an Irish paper, containing an engraving of what in England is called the *Hainault Scythe*—in French Flanders called *Piquet*, or *petite faulx*, (small scythe.) Under an impression that the implement was not unknown in the neighbourhood of the upper Hudson river, we sent the paper to Judge Buel, for his inspection and remarks—which, with observations on some other subjects, like every thing from his pen, are worthy of attention.]

DEAR SIR, *March 18, 1826.*

I have examined the draft of your *Hainault Scythe*, and find it the same as the *Dutch Scythe* which was introduced by the first settlers along the banks of the Hudson, which is still in use by their descendants, and is sold in our shops.

The scythe is an improvement on the sickle, for heavy or lodged grain, as it cuts equally clean, and

more expeditiously, than the former. But as it is difficult to acquire the expert use of it, the scythe is gradually getting out of use, and is seldom seen but among the Dutch population. The cradle has superseded it for light grain; and our labourers have become so expert with the latter, that it is used even for our heaviest grain, where it is not lodged. If any of your farmers, therefore, wish to be instructed in the use of the Hainault scythe, they need not, like the Scotch farmers, send to Flanders for teachers, as we can furnish them at less expense.

I have seen it somewhere stated, that Judge Peters once sent two grain cradles to a friend in Great Britain, and that a Yankee was found to demonstrate the economy of their use in the grain harvest. Their merits, as labour-saving machines, were fully acceded; but yet this very circumstance caused a mutiny among the labourers, lest they should be thrown out of employ by its introduction, and these implements were thrown by as useless

lumber; and the grain cradle, which so greatly economizes the labour of the American farmer, is still unknown to the British husbandman.

The first mention I find of the Hainault scythe is in Dr. Radcliff's Flanders. It has subsequently been figured and recommended in British agricultural works. And it has been recommended also as a modern improvement here; where it has been in use for centuries. Dr. Radcliff, and after him the British and American publishers, has given a description and figure of the Flemish *mouldebart*, which the reader cannot have failed to observe, is a mere modification of the *scraper* extensively used upon our canals and roads.

While on the subject of implements of husbandry, I cannot omit to speak in high commendation of Robert Sinclair's cultivator, one of which I have had in use several years. It is particularly useful in light soils. The tines are better calculated to pulverize the soil than those of any other model I have seen. It is used to advantage in dressing corn, and particularly root crops, such as mangel wurzel, ruta бага, turnips, &c. It is of great benefit in cultivating cabbages, and I know of no implement so useful in a nursery. It may be used superficially, or, by repeating its operation, driven to the depth of six inches or more. It requires the power of a single horse. This cultivator is susceptible, I think, of two improvements. It might have a central bull, and the wings made to expand or contract, according to the distance between the rows in which it is to operate. The other improvement is, to construct the extreme tines so that they may be elevated or shortened at pleasure, to work upon the sides of ridges or hills. This implement, with the aid of the drill barrow, greatly reduces the labour of cultivating mangel wurzel and turnips. A man, with the drill barrow, will put in five acres of these in a day, at regular distances. Neither the plough nor the harrow can be employed to advantage in cultivating these crops, especially while the plants are small. The cultivator is exactly suited for this purpose.

J. BUEL.

MERINO SHEEP.

DEAR SIR, *Steubenville, March 3d, 1826.*

At your request I send you the following statement of our flock of Merinos. In the summer of 1821, my brother and myself purchased of Wm. R. Dickinson, Esq., 100 Merino ewes for \$1500, and one buck for \$25. The following is the amount of sales of wool since that time:

1822, . .	500 lbs. wool—	\$365.35—	average 73 cts.
1823, . .	720 do.	535.80	do. 74
1824, . .	902 do.	604.70	do. 67
1825, . .	1180 do.	754.75	do. 64

		\$2260.60
Rams sold in the several years at 25 to \$50 each, . . .	}	750.00
		<hr/> \$3010.60

The flock at present consists of about 400 sheep, the wool of which, at the next shearing, will produce upwards of \$1000; and at a very low valuation we consider it worth \$6000, and in fact could sell it for much more, by dividing it into parcels. You will observe a considerable difference in the average price in the two first and the two last years, which is caused by a change in the prices of wool at the manufactory of B. Wells & Co. In 1822-3, there was no grade termed prime, and all full blood, or No. 1, sold for 80 cents. In 1824-5, the wool sorters made a new grade, which they called prime, or No. 1, and sold for 80 cents; and full blood, or No. 2, for 60 cents. I explain this, lest you might suppose

our flock was deteriorating—which would be just the reverse of the fact; for it is admitted by the wool staplers that it is yearly improving.

Our flock would have been considerably larger at present than it is, had we permitted our young ewes to have taken the buck at the usual age; but we kept them from the buck until the fall after they were two years of age, with an idea of increasing their size. This I send for your own eye, and not for publication, unless you may think it will be of service to the wool-growing cause.

Yours, with esteem,

JOHN M'DOWELL.

For the information of "A Connecticut Farmer," I send you a copy of one of our wool bills, with the prices given at B. Wells & Co.'s manufactory, for wool in the dirt:

No. 1, or prime, . . .	394 lbs. at 80 cts. per lb.
2, or full blood, 424 "	60 "
3, or $\frac{1}{2}$,	63 " 45 "
4, or $\frac{1}{4}$,	15 " 35 "
5, or $\frac{1}{8}$,	6 " 25 "
6, or common, . . .	— " 22 "

The 15 lbs. of No. 4, and 6 lbs. of No. 5, are from 3 coarse wethers, which we accidentally got. All our wool averaged, in 1824-5, 67 and 64 cts. Our fleeces averaged the same years 44 and 44 lbs., the lightness of which is owing to a great part of our sheep not being full grown, and the chief of the remainder being breeding ewes. As to our having made use of *Saxon bucks*, the "Connecticut Farmer" has mistaken me. I stated (if I recollect correctly,) that our flock was descended from Spanish ewes and Saxon bucks, which would have been precisely correct, if I had said a Saxon buck. A Mr. Muller imported a Saxon buck of a very superior form and quality, from whom he was purchased by a Mr. Caldwell, of New Jersey, a gentleman of profound skill and great taste in Merinoes, for the sum of \$1000. He was called Columbus. Mr. Dickinson purchased the foundation of his flock from Mr. Caldwell—among which he got three ram lambs out by Columbus, one of which was the original ram we purchased from Mr. Dickinson, and from which all our flock are descended.

JOHN M'DOWELL.

P. S. I have just seen Mr. Dickinson, after my letter was sealed, and have opened it to inform you what he says as to the origin of Columbus. In a conversation he had with Mr. Muller, (or, as he was better known in this country, the Baron de Basse,) respecting Merino sheep, he informed him that he had brought with him to this country from Saxony, Columbus and his mother, and sold them to Mr. Caldwell; that as there was no particular predilection for Saxony sheep at that time over Spanish, Mr. Dickinson never thought of mentioning the subject to Mr. Caldwell when he saw him afterwards; but he has now written to him to vouch for the authenticity of the Baron's statement, of which you shall hear in due time. Mr. Dickinson says, of his own knowledge, Columbus weighed 160 lbs. and his fleece 12½ lbs., and would be what is called now a pick lock fleece.

J. M'D.

ON PLANTING INDIAN CORN.

[From the *Easton Gazette*.]

The first rule which every farmer ought to be governed by, is to study and understand the nature of the vegetable he intends to deposit in the earth, and the laws by which it is governed in its progress to maturity: for every species of the vegetable kingdom is governed by certain peculiar and immutable laws, which were attached to each, by our all-wise Creator, from which none can be forced to deviate, without danger of dissolution.

I shall now proceed to give a succinct history

of the growth of corn. When planted late in March or early in April, its roots extend to a considerable distance under ground, before it appears above; and hence is derived one of the advantages of early planting. As the blades unfold and progress in height, the roots will not only keep pace with, but actually outstrip the growth of the top, and, as some assert, will under favourable circumstances, grow to the same length of the stock and tassel, when the grain is fully ripe. The seed should never be planted less than *two inches deep*. For whoever takes the pains to examine, will find that every stalk of corn, when it has arrived at the height of four or five inches, always takes fresh root about one inch above the first, which gradually decays and dies. If it is planted only at the depth of one inch, the new roots, in the effort they make to obey the laws of their nature, will not have sufficient depth of earth in which to display themselves, and of course the corn will become pale and sickly. About midsummer it again throws out another set of roots, the same distance above the former; and lastly, those roots which shoot above ground and descend into the earth, and appear designed by Providence as a prop to the luxuriant stalk and its appendages. All farmers will admit that this plant requires careful and repeated culture, and that it should be planted at a convenient distance. The plan of drilling, and cultivating the corn with the plough or harrow, only one way, may answer on land where silex or sand predominates, when the soil consists of a deep, black, porous or spongy loam. But I take it to be an undoubted axiom, in agriculture, that corn should be always cultivated with the plough and harrow both ways, on all soils where argil, or clay, predominates. But such is the inveteracy of custom, and the pride of opinion, that some are blind and obstinate, in spite of experience.

The most usual and approved distance is from four and an half to five feet each way. This is perhaps the best in good land, or where manure can be applied. But in our tired and exhausted soils, which cannot be assisted with manure, the above distance one way, and two and an half feet the other, with *only one stalk* in a hill, will prove better. The number of corn hills in an acre will, of course, be the same. Care should also be taken, to have the rows, the narrow distance, sufficiently straight to admit the plough and harrow between them. It would be well for some to make an experiment of the above plan on a small scale, by which they can test its efficacy.

Nothing farther occurs at present on the subject of planting. You may expect shortly, a few remarks on the cultivation of corn.

A TALBOT FARMER.

DISEASE OF PIGS.

Answer to Inquiry in No. 3.

Cook or boil all food for pigs when weaned young. Corn meal, as a general food, is best; but even this in its first use, should be mixed with a little chop rye and a small portion of shorts, to correct its fermenting qualities; and *always* season the mess with a due quantity of salt. This article, so seldom thought of for hogs, is as essential to their health as to any other species. Milk is a valuable food, and answers well to mix with the meal, but should be boiled.

W.

An excellent and cheap food for fattening Hogs.

Take one part of corn meal, and two parts pumpkins; mix and boil together, seasoned with salt: let this be their common food until twelve or fifteen days before killing, when feed on coarse dry meal, seasoned.

W.

April 10th, 1826.

DISEASE OF PIGS.

Wilmington, Del. April 11, 1826.

ESTEEMED FRIEND,

I observe, in your last number, an inquiry for a remedy for the violent purging to which newly weaned pigs, or shoats, are subject.

I believe the cause is generally owing to giving them too much slop or swill at once—they should have little given at a time, and oftener than three times a day; five or six times I have my young pigs fed with skim milk, having wheat bran stirred in it, and never give them as much at once as they can eat; with this feed and treatment I never see them purge. If milk and bran are not to be had, it is necessary to give them with other slop, *oats and corn unground, and in very cold weather corn only*, and to keep them dry, clean and warm. The greatest injury a young pig receives is, by giving it *as much slop as it can gorge as once and seldom feeding*. I would advise, never raise a pig, that was not 3 months old previous to winter setting in, when younger they get stunted, and never, with the same keep, are as heavy as spring pigs are, at the following Christmas.

THO. MASSEY.

ON DISEASES AND ACCIDENTS OF FARMERS.

Observations on the means of preventing and relieving the accidents and diseases, to which farmers are particularly subject. By JAMES MEASE, M. D.

[From the Memoirs of the Philadelphia Society for promoting Agriculture—Read May, June, July, August, 1825.]

[Continued from p. 27.]

Bites of Snakes.—Tie a string above the bitten part, and suck the wound. There is not the least danger in so doing, unless the lips be sore; spit out and rinse the mouth with water. Then use some of the following remedies, all of which have been found successful:

1. Apply ley of wood ashes, or a solution of potash in water, to the bitten part; and give diluted ley, or tea grains of potash in a cup of water, every half hour.

2. Mr. Mayrant, of South Carolina, relates the cases of two negroes cured, by giving Cayenne pepper and whiskey.† In one, the dose was one tea-spoonful, in a glass of whiskey. The three first doses were thrown up; the fourth remained, and after more than a quart of whiskey had been taken, the man spoke. This great quantity was taken in two hours. In the course of the night three quarts were used, but he supposes that one may have been lost in pouring it down his throat. The next day he gave every hour, spirit of ammonia, and also whiskey and water, with very nourishing food. In another case, he cured a person after giving a quart of whiskey, with red pepper, in ten or twelve hours.

Dr. Ramsay, of Charleston, S. C. published the case of a person who was cured by large doses of brandy and opium.

3. Mr. Williams extols the spirit of ammonia in the bites of venomous snakes in the East Indies. The dose is from thirty to forty drops every ten minutes in water, until relief be obtained. The medicine is also to be applied to the wound.

4. So many cases in the United States have occurred of the efficacy of olive oil, in the cure of the bites of venomous snakes, that it can be confidently recommended. It is to be applied to the bitten part, and taken internally, without limitation.

* Dr. Brickell, of Savannah. To sheath the acrimony of the ley or potash, it should be diluted with infusion of flaxseed, or gum arabic water.

† Med. Recorder, vol. 6, p. 619.

as to dose; sucking of the wound, and a ligature above it, should never be neglected.*

Stings of Insects.—The pain from the stings of wasps, bees and hornets, is quickly relieved by rubbing the part with olive oil, or cold ley. The sting should be extracted, if possible. Common salt, moistened, and applied to the part, has been recommended from experience, and in a case where a person had been stung on the inside of the throat by a wasp, the alarming symptoms were instantly relieved by swallowing repeated strong doses of salt and water. In some cases of severe attack, a fever was excited, attended with considerable swelling in the part. In such the loss of a few ounces of blood will give instant relief; then apply the oil. It has been recently said, that chalk scraped on the part, will give immediate ease. It is important to know that if a hive of bees should settle on a person, there will be no danger of being stung, if he can preserve so much presence of mind as to remain quiet for a short time, when the bees may be gently brushed off, or taken off by one accustomed to handle them, and put into a hive.

The bites of spiders are often highly poisonous, and several cases have been mentioned of death being occasioned by them. If the oil does not succeed, apply pounded plantain leaf to the part, and take a few spoonful of the juice of the leaves. This remedy was announced a few years since in a southern paper, as having succeeded in a very serious case.†

Remitting Fever, or Bilious Fever.—Where the disease is preceded by the usual symptoms, as languor, loss of appetite, and head-ache, it often may be prevented by a gentle emetic and purge, avoiding meat, and the assistance of rest, a warm bath, or bathing the feet in warm water at night. When the fever and head-ache are severe, twelve ounces of blood should be taken away. The operation should be repeated after a few hours, if the pain do not abate. Cool drink may be freely taken. Avoid sweating by heating remedies, in the commencement of the complaint. The diseased and increased action of the system must always be reduced before sweating be attempted. The vessels will then pour out their fluids freely, when necessary, by the aid of warm diluting drinks, and of such medicines as are known to determine to the surface. Tamarind water, or thorough-wort tea are excellent for this purpose. Frequent purging in this

disease is essential to clear the bowels of bile, which forms with great rapidity, and when collected in the stomach, causes a return of fever. For this purpose, three or four grains of calomel should be given at night, and a dose of epsom salts early in the morning, every other day. When the fever continues obstinate, after the loss of blood and a thorough evacuation of the bowels, with great heat and dryness of the skin, the body should be sponged with cool water and vinegar, which will often "break a fever," that would otherwise prove very tedious. Should the fever still continue, no time is to be lost in causing a slight salivation, by giving three grains of calomel every two hours. The fever will cease as soon as the mercury takes effect. Relapses are to be guarded against by avoiding exposure to bad weather; by occasional purging, and caution in indulging a returning appetite. Much may be done by persons living in sickly countries, or in times of a prevailing epidemic fever, to prevent disease, by taking a dose of Peruvian bark every morning, or by eating breakfast before going out; avoiding wet feet, checks to perspiration, night air, especially during sleep, and a blazing sun.

Fever and Ague.—Is the epidemic disease of a marshy country or district; but it is often produced by exposure to draughts of air when the body is heated, and in a state of perspiration. The proper mode of treatment is an emetic about three hours before the cold fit is expected; then a purge, and finally the Peruvian bark during the intervals of the disease. A large tea-spoonful may be taken every hour or two in water, or sound wine of any kind. The addition of one clove, and of ten grains of Virginia snake-root, both in powder, will increase its powers. As the stomach often nauseates the medicine, it ought to be mixed in a room apart from the invalid, and brought to him at the proper time. He should then swallow it without delay, rinse his mouth with water before inspiring, and chew a piece of bread; there will then be little difficulty in retaining the bark. From thirty to sixty drops of laudanum, if taken upon the first symptom of the cold fit, will suspend or shorten it; but a much more agreeable remedy is the warm bath. This should always be used for children. If the stomach be very delicate, a lump of sugar dipped in compound spirit of lavender, and eaten, will quiet it. A small portion of manly resolution will greatly aid in preventing the stomach from rejecting the medicine. If the bark produce constipation, ten grains of rhubarb may be added to every other dose of it; or if the stomach will permit, he may chew a small portion of the root and swallow the saliva. Those who have an uncontrollable aversion to the bark, make take the sulphate of quinine in doses of one, one and a half, or two grains. A cheaper remedy is "Fowler's solution of arsenic;" six, eight, or ten drops of this medicine may be taken three times a day, one hour after meals, in a wine glass of water, to which a tea-spoonful of the compound spirit of lavender may be added, if nausea should occur. Children to whom the bark is very disagreeable, may take two, three, or four drops, according to their ages, twice or thrice daily; ample experience of this medicine enables me to attest its virtues, and pronounce it perfectly safe, if not too long continued. After two weeks use it should be omitted, and a dose of rhubarb or castor oil taken. During its use, the person must avoid taking cold or being wet. The diet of persons in this disease, must be savoury and nourishing. A change of air, or a journey, often will cure this disease without medicine. Obstinate cases yield readily to the shower bath, if exercise be taken soon after its use. Weakly persons ought to wear a flannel shirt during the winter subsequent to the season in which they were affected with this disease, changing it regularly once a week.

Cutting a Blood-vessel.—All that can be done,

until medical aid be called, is to put a piece of folded cloth on the part, and to apply a bandage; or if the wound be small, to press the thumb and finger firmly upon the bleeding vessel, and sit still, if the wound be in the foot, until a carriage is procured to convey the person home. All medicines to stop the blood flowing from a large vessel are useless. As every person employed with an axe, is liable to this accident, no one should go alone into the woods to cut timber.

Inflamed Veins.—These are sometimes caused by a dull or rusty lancet being used to bleed. The disease is noticed here, from having seen the state of the lancets sometimes used by country bleeders, and because those who employ them are not aware of the danger attending the operation. It also has been brought on by using the arm freely the same day a vein was opened in it. Two deaths have occurred from this cause in Philadelphia. Medical men ought to be employed to bleed in the country. The remedies are, purging, rest, and low diet. Dr. Physick applies a blister over the inflamed vein.

Bleeding at the Nose.—This is sometimes an effort of the system to relieve a too great fulness in the head, and unless it proceed to such an extent as to induce weakness, should not be stopped. In some young persons it occurs so frequently, as to become very troublesome. When necessary to check the flow of blood, snuffing up cold water will often prove effectual; but when this does not answer the nose must be plugged. To do this, roll up a piece of linen or cotton to a point, oil it, and then pass it up the nostril, by a circular motion, until it reach the bleeding vessel, and let it remain for some hours. Persons subject to this disease, ought to keep such a plug by their bed side. When the disease attacks growing boys in high health, it may be prevented by an occasional dose of physic, by avoiding severe exercise, and the use of as little animal food as possible: but on the contrary, when it appears in those of feeble constitutions, the diet should be generous, a dose of Peruvian bark taken occasionally to strengthen the system; and a journey of three weeks or a month performed in pleasant weather. The powder of Puccoon, or red-root, snuffed up, will often check a bleeding of the nose.

(To be continued.)

REMEDY FOR THE FOULS IN CATTLE.

DEAR SIR,

Caroline, N. Y., April 5, 1826.

I omitted to say any thing, at the time, of a disease in cattle's feet, that seemed to give alarm some months since, which is very common with us, and is called *the foul*. It appears to be an indolent sore, and meets with rough treatment, such as drawing a straw of hair between the claws of the hoof till it bleeds, or appears quite tender; and after, stimulating applications, in proportion to its indolence or insensibility, till it gets into a healing state. It is never considered dangerous. The loss of the use of oxen, for a season, is the only inconvenience experienced from it.

Yours, respectfully,

JOS. SPEED.

SWINE.

A gentleman in Worcester informs us that a litter of eight hogs was lately killed in that town, which averaged at ten months old, 336 lbs. each. The person who owned the above, had one last year which weighed upwards of 400 at twelve months old. Another person killed a pig at six months and three days old, which weighed 233 lbs. They were all of the *Bedford breed*, or *English Broad Backs*. This breed is in high repute in Worcester county; has small bone and little offal; hard, rich pork, and withal obtained at a much cheaper rate than most

* The following article was taken from the Augusta (Georgia,) Herald, a few years since. The popular confidence in the efficacy of plantain in bites of snakes, has long been great in the United States. It is presumed that the broad-leaved plantain is alluded to.

† In a late paper we mentioned the death of a person from the bite of a rattle-snake; in conversing with a very worthy and respectable physician on the subject, he informed us, that for forty years he had been in the habit in such cases, of administering the juice of the green plantain, and he never knew a single instance of its failing to afford relief to persons bitten by snakes: he had given it, he observed, when the sufferer was apparently in the agonies of death, and when considerable force was required to open the mouth; and in every case the relief was almost instantaneous. The plantain is to be bruised, and the juice pressed out, and that given to the patient as soon as possible after the bite; but it is never too late to give it while the sufferer is alive. After pressing out the juice, the plantain may be boiled in milk, and also given to the patient. The certainty of this remedy against the bites of snakes, and such venomous reptiles, should induce persons in such situations where those accidents are likely to occur, to cultivate the plantain in their gardens or fields, that a remedy against an accident which may otherwise prove fatal, may at all times conveniently be procured.

‡ See the Domestic Encyclopedia, article Plantain. Whether the species used, was the one with broad leaves, or that with narrow leaves, is not mentioned. Try the first species.

§ Or bone-set. *Eupatorium perfoliatum*.

other breeds. Their early maturity is of immense importance to the farmer.

A friend in Westborough, Mass., states that a hog twenty months old, raised by Charles Parkman, Esq. of that town, was killed last week, which weighed 600 lbs. and measured from the tail to his nose 6 feet 1 inch; around the body over the fore shoulders 5 feet 7 inches.

It is stated in the Newburyport paper that Mr. James Ferguson, superintendent of the Fatherland farm in that vicinity, (owned by that eminent agriculturist, Gorham Parsons, Esq. of Brighton,) lately sold 13 hogs, the weight of which was as follows: 494—424—530—406—556—454—496—336—578, 370—500—400—526; and two pigs, weighing 211 and 255—aggregate 6,536 lbs. at 7 cents per lb., amounting to \$457.52. They were of the Bedford and Byfield breeds. [New Eng. Farmer.]

PROSPECT OF CROPS.

Extract of a letter to the Editor, dated

DEAR SIR, Columbia county, Geo., April 1, 1826.

The present spring has been remarkably forward; some of our forward wheat has been in head for more than a week; first planting of corn generally up. We have had several smart frosts since the wheat has been in head, and have heard of some damage being done to both corn and wheat. I examined my own wheat, and find the grain has been filling since the first frost, and no difference appearing from what it was before the frost, am in hopes the injury is not extensive.

HORTICULTURE.

GOOSEBERRIES.

(Continued from Am. Farmer, p. 29.)

GENERAL OBSERVATIONS.

Having minutely laid down the cultivation of the gooseberry, whether raised from seed, cuttings, or suckers, to its final perfection in the fruit, I shall now subjoin some hints for the destruction of the insects that infest the bushes.

The insects that most infest the gooseberry, are the green-fly, the caterpillar, the red-spider, &c.

After many experiments and attempts to destroy these species of insects, I find the following mixture to be the most effectual and cheapest; and being confident of its utility, I submit it for the use of my readers: in the first place, get a large handful of young elder leaves and twigs, one pound of the coarsest and strongest tobacco, and boil them together in some old pot or copper, in two or three gallons of soft rain-water; let them be well boiled, after which take out all the leaves and twigs of each, and put half a gallon of quick lime into the liquor, and after it is well dissolved, take out all the grit of the lime and throw it away; then add to the liquid half a pound of blue ointment, five pounds of soft green soap, two pounds of flour of sulphur, and three pounds of camphor, or puff balls, and necessary another gallon of soft rain or pond water; set them over a gentle heat till properly dissolved, during which time they are to be stirred round with a stick; when all is properly dissolved and mixed up, take it off the fire, and immediately put it into a coarse vessel or vessels, with about twenty gallons of rain or pond water; shut it up, and let it remain for a few days, when it will be fit for use.

The best mode of using the above liquid is with a syringe, or squirt, as you can most conveniently get it round the bush, and under the leaves where the insects are most destructive.

When the bush is infested with an insupportable blight, destroyed by browsing, or thick bass, or when the bush is infested with fumigating

bellows at the lower part of the bush, and fuming with a mixture of coarse tobacco and soft hay.

Bushes are also speedily cleared of the blights, at little expense and trouble, by fumigating them with brimstone strewed on lighted charcoal; this effectually kills the insects; but the workmen must get to the windward of the bush, as the fumes both of charcoal and sulphur are very offensive and pernicious.

Fumigating should always be done in the morning or evening of a dull heavy day, when the bushes are damp.

[The author of the preceding communication gives a catalogue of 49 kinds of red gooseberries—35 kinds of yellow—53 of green—and 44 white. The largest red, he says, is the Top sawyer, weight 26 dwts. 17 grains; the largest yellow is the Nelson's waves, weight 21-6; the largest green is the Ocean, 20-11; the largest white is the Smiling beauty, 22-18.]

CHEROKEE ROSE.

PUBLIC SPIRIT.

[The following memoranda came into our hands through a third person, with permission to use it as an example of the publick spirit of an individual, who seeks to do good for its own sake, and without any wish or expectation of reward beyond the consciousness of contributing, disinterestedly, to the improvement of agriculture. Let us reflect how widely and rapidly the best agricultural products and improvements might be disseminated, were every one to devote himself thus zealously to the cause, and thence endeavour, as Mr. Stabler, of Montgomery county has done, to emulate the example of such men as Mr. Rowan.]

CHEROKEE ROSE CUTTINGS.

Distributed gratuitously by Mr. C. E. Rowan, of South Carolina, in boxes, amongst the following persons, in the years 1820, 1821.

The hon. Judge Story, Boston; the hon. Timothy Pickering, do.; the Massachusetts Agricultural Society, to the care of Mr. Timothy Pickering; David Pitts Lloyd, Essex county, Virginia; Charles Edmonston, Charleston, South Carolina; Wm. Pugh, North Carolina; John L. Glaser, Pittsburg, Pennsylvania; Dr. James Glasgow, Belle Air, Harford county, Maryland; Joseph P. Casey, Baltimore; Dr. S. S. Griffin, Gloucester county, Virginia; Robert Weir, Tappahannock, Virginia; Thomas P. Bennett, Easton, E. S. Maryland; H. Skipwith, Balls Ville, Powhatan county, Virginia; William Mewburn, South East, Genito Bridge, Richmond; Thomas H. Harvey, Wicomico church, Northumberland county; Robert Douthat, Richmond; Charles Palmer, do.; Fielding Lewis, James River; Henry E. Watkins, Prince Edward, Virginia; Alexander Morson, Fredericksburg, do.; Thomas R. Rootes, Gloucester; John S. Skinner, Tench Tilghman, Eastern Shore, Md; T. F. Wallis, P. M. Bethlehem, Georgia; Benjamin Anderson, Goochland Court House, Virginia; Edward Garland, do. do.; Wm. H. Tilghman, Talbot county, Eastern Shore, Md.; Winter Bray, Tappahannock, Virginia; Isaac Smith, Northampton, do.; Robert H. Row, Susquehanna county, do.; John Scott, Fauquier county, do.; Sir John Sinclair, Edinburgh; Richard H. Cocke, Cabin Point, Virginia; John P. Cobbs, Richmond, do.; John Eddowes, Middletown, Delaware; Thomas Chase, Annapolis, Md.; Henry Holliday, Eastern Shore, Md.; Charles Neale, Alexandria; Robert Oliver, Baltimore; J. H. Bernard, Richmond, Virginia; W. W. Anderson, Statesburg, South Carolina; Leonard Abercrombie, Ouachita, Louisiana; James Flemming, Wilmington, North Carolina; G. A. V. Hopkins, Baltimore; Edward Noble, Spring Marvland; Samuel

Henry Taylor, Port Royal, Virginia; James Barbour, Barboursville, do.

[We should be glad to learn what is the probable result of experiments made with the Cherokee rose cuttings, by any of the above named gentlemen.]

GEORGIA WINES.

[Extract from a letter to the Editor.]

"The wine made by Mr. Thomas McCall, of Georgia, in 1824, of Madeira colour, has sold for \$2, a gallon, as soon as offered at market; and is preferred to any imported wine by our best judges in the upper country, and, I doubt not, would be preferred in our sea port towns, where his wine of that year has not yet been tasted. If our government would give sufficient direct encouragement to this branch of husbandry, foreign wines would be forced out of our market in twenty-five years."

RURAL ECONOMY.

CAST IRON GRIST MILL.

Much has lately been said about this mill. Will your correspondent D. G. S. or any other practically acquainted with it, state whether this mill, like all others, does not wear smooth? How long it may be in constant use before this happens; and if there is any way to have it sharpened? W.

STRAW PLAITS.

The committee appointed by the Royal Dublin Society having called upon some of the most eminent importers and venders of Leghorn hats, to assist, with their judgment, in the adjudicating of premiums, were favoured with two ladies and three gentlemen, who concurred with the Committee in adjudging

The first premium of 20l. for the hat manufactured by Miss Boake.

The second premium of 15l. for that manufactured by Miss Gormly.

The third premium of 10l. for that manufactured by Miss Duchworth.

The fourth premium of 5l. for that manufactured by Miss Bickerstaff.

The Committee report, That, in their opinion, the *cynosurus cristatus* is not the material best adapted for this manufacture, its nature being too hard and wiry, and generally not even in colour. The straw of rye, *secale corale*, is, in their opinion, much preferable; and that one of the hats which obtained the first premium, composed of "sweet-scented vernal grass," *anthozanthum odoratum*, appears to be superior to any other produced.

The report adds, "That the extraordinary improvement evinced in the manufacture of these articles, within three years, and the excellence to which they have attained, induce your Committee to be of opinion, that, if it be steadily persevered in, Ireland very shortly will be adequate to compete with Italy in that article; in which opinion they feel warranted by the importers, who declared, with respect to the hats which obtained the first premium, 'that if they were put in a case with Leghorn hats, as if imported here, there was not an individual in the trade who could distinguish them from the best description imported from Leghorn'."

perceive, by both English and other papers, that the Societies in Great Britain and Ireland are offering premiums to encourage the manufacture of hats in imitation of those imported from Leghorn. Would it not be well for the Agricultural Societies in the United States to follow the example

ple? The Editor of the Farmer, if he chose to do so, could excite such a spirit.

In a late Irish paper, I saw an article which seems to me to be well calculated for that purpose, by throwing light towards an important improvement in this manufacture, chiefly in pointing out the best material to be used in making hats as good as the imported ones. If I recollect right, rye straw is thought here to be the best material; but in the account which I now send to you, it is believed that the sweet-scented vernal grass is the most proper.

WATER BORING AT HARPER'S FERRY.

[From the Alexandria Herald.]

Mr. Tindrel, who has been engaged since last June at Harper's Ferry, in boring for water, arrived in town yesterday. He states that he has perforated the solid rock to the depth of 266 feet, and found good water at a far less depth, but that it would rise to only a certain height and no further. That he continued his operations till the great freshet in the Potomac; when on a sudden the muddy water of the river backed into the hole he had bored in the rock, which induced him to believe that there was a communication between the hole aforesaid and the river. He was right in his conjectures, for when the freshet subsided the water in the hole came down to its usual level, leaving the same limpid water as heretofore. And now Mr. Tindrel is on his way to New York to procure copper tube, which when fixed, and the interstices between its exterior and the rock being chinked up with a composition prepared for the purpose, he adds, there can be no doubt but that the water will rise to the surface of the earth sufficient for all purposes.

[Since the above was politely communicated to us, we have conversed with Mr. Tindrel, who confirms its particulars.—EDIT. A. H.]

WATER BORING IN ALEXANDRIA.

The workmen have got to the depth of 440 feet; water is within about 32 feet of the surface of the earth. The specimens of stratum for the first 150 feet are the same as those of 440 feet, alternately varying from clay to sand, of various casts and colours.

[Alex. Herald.]

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

A WHISPER TO THE WIFE.

[Continued from p. 32.]

Chapter VI.

ON FAMILY DUTIES.

At your entrance into the marriage state, gentle lady, you commenced a character which involves on you new duties and new responsibilities.—Your husband, as the master and mainspring of his family, ought certainly to lead the devotions of it. But should he be so unwise, so unfortunate, so lost to his own happiness, as to treat lightly the things which belong to his everlasting peace, the task, gentle lady, devolves on you. Influenced then by that awful verse in Jeremiah where the prophet invokes the Almighty to pour out his fury upon the families that call not on his name, (Jer. x. 25.) let the Bible be every morning laid on the table after breakfast,* and let a chapter be read with attention; and then by a short but fervent prayer call down blessings

* When a family disperses after breakfast to their different avocations, it is generally difficult to collect them again. Therefore, to obviate this, let the Bible be brought before the breakfast things are removed, or, at least, before the party stand up from the table.

on your head. And by no means exclude your servants from the hallowed privilege. Independent of duty, you wish for honesty and fidelity from them, and how can you reasonably expect these while you neglect to lead them to the source which produces such good conduct.

"When once a woman is married, when once she has enlisted among the matrons of the land; let not her fancy dream of perpetual admiration; let her not be sketching out endless mazes of pleasure. The mistress of a family has ceased to be a girl. She can no longer be frivolous or childish with impunity. The angel of courtship has sunk into a woman; and that woman will be valued principally as her fondness lies in retirement, and her pleasures in the nursery of her children. And woe to the mother who is obliged to abandon her children during the greater part of the day to hirelings—no, not obliged; for there is no duty so imperious, no social convenience or fashionable custom so commanding as to oblige her to such shameful neglect: for maternal care, let her remember, supersedes all other duties."

In the matrimonial character which you have now assumed, gentle lady, no longer let your fancy wander to scenes of pleasure or dissipation. Let home be now your empire, your world! Let home be now the sole scene of your wishes, your thoughts, your plans, your exertions. Let home be now the stage on which, in the varied character of wife, of mother, and of mistress, you strive to act and shine with splendour. In its sober, quiet scenes, let your heart cast its anchor, let your feelings and pursuits all be centered. And beyond the spreading oaks that shadow and shelter your dwelling, gentle lady, let not your fancy wander. Leave to your husband to distinguish himself by his valour or his talents. Do you seek for fame at home; and let the applause of your God, of your husband, of your children, and your servants, weave for your brow a never fading chaplet.

An ingenious writer says, "If a painter wished to draw the very finest object in the world, it would be the picture of a wife, with eyes expressing the serenity of her mind, and a countenance beaming with benevolence; one hand lulling to rest on her bosom a lovely infant, the other employed in presenting a moral page to a second sweet baby, who stands at her knee, listening to the words of truth and wisdom from its incomparable mother."

I am a peculiar friend to cheerfulness. Not that kind of cheerfulness which the wise man calls the mirth of fools,—always laughing and talking, exhausting itself in jests and puns, and then sinking into silence and gloom when the object that inspired it has disappeared. No—no! The cheerfulness I would recommend must belong to the heart, and be connected with the temper, and even with the principles. Addison says, "I cannot but look on a cheerful state of mind as a constant, habitual gratitude to the great Author of nature. An inward cheerfulness is an implicit praise and thanksgiving to Providence under all its dispensations: it is a kind of acquiescence in the state wherein we are placed, and a secret approval of the divine will in his conduct towards us." I think there is something very lovely in seeing a woman overcome those little domestic disquiets which every mistress of a family has to contend with; sitting down to her breakfast-table in the morning with a cheerful, smiling countenance, and endeavouring to promote innocent and pleasant conversation among her little circle. But vain will be her amiable efforts at cheerfulness, if she be not assisted by her husband and other members around; and truly it is an unpleasant sight to see a family when collected together, instead of enlivening the quiet scene with a little good-humoured chat, sitting like so many statues, as if each was unworthy the attention of the other. And then, when a stranger comes in, O dear, such smiles, and animation, and

loquacity! "Let my lot be to please at home," says the poet; and truly I cannot help feeling a contemptible opinion of those persons, young or old, male or female, who lavish their good-humour and pleasantry in company, and hoard up sullenness and silence for the sincere and loving group which compose their fireside. They do not behold home with the same eyes as did the writer of the following lines:—

"Home's the resort of love, of joy, of peace;
So says the bard, and so say truth and grace:
Home is the scene where truth and candour move,
The only scene of true and genuine love.
'To balis and routes for fame let others roam,
Be mine the happier lot to please at home.'
Clear then the stage: no scenery we require
Save the snug circle round the parlour fire;
And enter, marshall'd in procession fair,
Each happier influence that governs there!
First, Love by friendship mellowed into bliss,
Lights the warm glow, and sanctifies the kiss;
When, fondly welcom'd to the accustom'd seat,
In sweet complacence wife and husband meet;
Look mutual pleasure, mutual purpose share,
Repose from labours to unite in care!
Ambition! does Ambition there reside?
Yes: when the boy, in manly mood astride,
With ruby lip and eyes of sweetest blue,
And flaxen locks, and cheeks of rosy hue,
(Of headstrong prowess innocently vain,)
Cantered;—the jockey of his father's cane:
While Emulation in the daughter's heart
Bears a more mild, though not less powerful part;
With zeal to shine her little bosom warms,
And in the romp the future housewife forms:
Think how joy animates, intense though meek,
The fading roses on their grandame's cheek,
When proud the frolic children to survey,
She feels and owns an interest in their play;
Tells at each call the story ten times told,
And forwards every wish their whims unfold."

"To be agreeable and even entertaining in our family circle," says a celebrated writer, "is not only a positive duty but an absolute morality."

I cannot help quoting the following passage from Mrs. H. More, as an admirable illustration of true sweetness of temper, patience, and self-denial—qualities so essential in a wife and mistress of a family. "Remember, that life is not entirely made up of great evils, or heavy trials, but that the perpetual recurrence of petty evils and small trials is the ordinary and appointed exercise of Christian graces. To bear with the feelings of those about us, with their infirmities, their bad judgments, their ill-breeding, their perverse tempers—to endure neglect where we feel we have deserved attention, and ingratitude where we expected thanks—to bear with the company of disagreeable people, whom Providence has placed in our way, and whom he has perhaps provided on purpose for the trial of our virtue—these are the best exercise; and the better because not chosen by ourselves. To bear with vexations in business, with disappointments in our expectations, with interruptions in our retirement, with folly, intrusion, disturbance, in short, with whatever opposes our will and contradicts our humour—this habitual acquiescence appears to be the very essence of self-denial. These constant, inevitable, but inferior evils, properly improved, furnish a good moral discipline, and might well, in the days of ignorance, have superseded pilgrimage and penance." Another remark of the same author is also excellent: "To sustain a fit of sickness may exhibit as true heroism as to lead an army. To bear a deep affliction well, calls for as high exertion of soul as to storm a town; and to meet death with Christian resolution, is an act of courage in which many a woman has triumphed, and many a philosopher, and even some generals, have failed."

(To be continued under the head of Conduct towards Relations acquired by Marriage, &c.)

Great Driver, son of Old Snake; his dam was bred by the Duke of Devonshire, and got by Flying Childers, out of a daughter of Grantham. From 1748 to 1755, he was winner of thirty 50l. plates; in 1749, he won the town plate at Newmarket; in 1750, he again bore off the same prize, carrying 12 st. For an account of his running against Aaron, at Epsom, in 1754, see <i>Annals of Sporting</i> , vol. ii. p. 28.	
<i>Mambrino, Lord Grosvenor's. It is his blood that gives the New York Eclipse his value. He got Messenger, who got the dam of Eclipse. Mambrino was, perhaps, the strongest blood horse ever bred. Duroc, Eclipse's sire, was but so so. R. of R.</i>	
<i>Mark Anthony, Conductor, Pyrrhus, and Pantaloon, were all of a year, and all the first foals of their respective dams—except Pyrrhus, they proved excellent stallions as well as racers. Mark Anthony won 19 times over Newmarket, and received forfeits and compromises equal to 2530 gs. although he broke down at six years old. N. B. He was then a young horse. R. of R.</i>	
Marske, July, 1779	32
*Matchem, February, 21, 1781	29
Mr. Fenwick, the owner of Matchem, derived more than 17,000l. profit from his services as a stallion, exclusive of his winnings as a racer.	
Mercury, April, 1793	14
Meteor, June, 1811	28
Morwick Ball, January 4, 1787	25
Overton, May 30, 1801	13
Pandolpho was shot in 1813	24
Partner, 1747,	29
He is allowed to be as fine a stallion as any ever bred in this kingdom. Old Partner was got by Jigg, son of the Byerly Turk; his dam was got by Curwen's Bay Barb; his grandam by Old Spot; his great grandam by the chestnut white-legged Lowther Barb, out of the old Vintner mare. Curwen's Bay Barb was a present from Muly Ishmael, king of Morocco, to Lewis 14th, and was brought into England by Mr. Curwen, who procured two Barbs, (from Counts Byram and Thoulouse, two natural sons of Lewis 14th,) both of which proved excellent stallions, and are well known as <i>Curwen's Bay Barb</i> and the <i>Thoulouse Barb</i> . Curwen's Bay Barb was sire of Mixbury and Fantivy; the first was only 13 hands 2 inches high, and yet not more than two horses of his day could beat him; Brocklesby, Little George, two Mixburys, full brothers to the first Mixbury; Brocklesby Betty, considered by many to be the best mare that ever was in England; her dam was called the Hobby mare, bred by Mr. Leeds; her sire was the Lister or Stradling Turk, brought to this country by the Duke of Berwick, from the siege of Buda, in 1686, in the reign of James the second. Curwen's Bay Barb was sire also of Long Meg and Creeping Molly, extraordinary high formed mares; Whiteneck, Mistake, Sparkler, and Lightfoot, very good mares. He got two full sisters to Mixbury, one of which bred Partner, Little Scar, Soreheels, and the dam of Crab: the other was the dam of Quiet, Silver Eye, and Hazard. The Thoulouse Barb became afterwards the property of Sir J. Parsons, and was the sire of Bagpiper, Blacklegs, Mr. Pantons Molly, and the dam of Cinnamon.	
Paymaster, 1791	25
Phenomenon, soon after landing in America, } 1798	18
Phlegon, 1790	25

* He may be truly said to have earned more money than any other horse in the world. During nine years was engaged to cover 25 mares at 50 gs. He was the quietest stallion ever known, to which may be attributed his great age. He died February 21, 1781, in his 33d year.

R. of R.

Pipator, February 20, 1804	17
Pontifex, 1794	23
Pot-8-os, November, 1800	27
Prospero; suddenly, after covering a mare, } July 17, 1816	15
Regulus, 1765	26
He was never beat: he was got by the Godolphin Arabian; his dam was the celebrated Grey Robinson, by the Bald Galloway; his grandam by Old Snake; his great grandam was the famous mare called Old Wilks, and got by Old Hautboy. Regulus was sire of Trajan, Royal, Cato, Smiling Polly, South, Brutus, Sappho, &c.	
*Rockingham, 1799	18
Royalist, in America, 1811	21
Sampson, 1777	32
In 1752, then seven years old, he won a prize of 100l. at Newmarket, carrying 11 stone; and in the same year he won the following King's plates, viz: at Winchester, Salisbury, Canterbury, Lewes and Newmarket. He was got by Blaze, his dam by Hip, son of the Bay Barb.	
Sancho, September, 1809	8
Sedbury, 1759	25
Shark, in Virginia, about 1795-6—he won a cup of 120 guineas; eleven hds. of claret; and 20,000 gs. in stakes, plates, matches and forfeits. He paid forfeit to, and received forfeit from Lord Clermont's famous Johnny, who died soon after he went out of training. Johnny won 15 times at Newmarket in 1775 only. Shark was sire to the dam of Florizel. Johnny beat Firetail and Pumpkin, who ran Rowley's mile in 1 minute 4½ seconds. Rowley's mile is one mile and one yard. The grandam of Mr. Randolph's Duchess, was own sister to Johnny. R. of R.	
†Sir Peter Teazle, August 10, 1811	27
Sir Solomon, April 20, 1819	21
Skyscraper, December, 1807	21
Slope, 1794	12
Snap, July, 1777	27
Snip, May 8, 1757	21
Soldier, 1802	23
Spadille, 1803	19
Spectator, 1772	23
Squirrel, 1790	26
Stamford, 1820	26
Star, in South Carolina, 1811	26
Stripling, September, 1817	22
Tandem, February, 1793	19
Tartar, 1759	16
†Thunderbolt, November, 1819	13
Thunderbolt, full brother to Smolensko, was found cast in his stable stifled, his hip dislocated, and his head almost beaten to pieces. One of his fore hoofs was hitched fast in the throat-band of his headstall. At three years old, when in training, Sir Charles Bunbury refused 2000 guineas for him; he was soon after accidentally lamed, and turned into the stud.	
Tortoise, 1776	14
Trentham,	
Usquebaugh, late in 1822	
Volunteer	
Warter, February, 1812	18
Waxy, April 10, 1818	28
Weasel, March, 1801	24
Wellesley Grey Arabian, in the winter of 1811-12. A most excellent engraving of this horse, from an original picture by Marshall, is given in Scott's Sportsman's Repository.	

* Best son of Highflyer out of Purity by Matchem, Old Squirt mare. R. of R.

† By Highflyer out of Papillon by Snap.—R. of R.

‡ He got very bad stock; they were fleet for a short distance, but utterly jadish. He did great injury to the blood stock of Cheshire, and almost ruined the fine stud of Lord Grosvenor, who bred from him too long.

R. of R.

Williamson's Ditto, 1821	21
Witchcraft, in 1813, had his leg broken by the kick of a mare, and was obliged to be shot.	
Wizard, killed himself by running against a bar in the stable yard, after the season of 1813	7
Woodpecker, 1798	25
Worthy, after the season of 1814	19
Young Cade, November 27, 1764	17
Young Eagle, 1810	10
Young Marske, October, 1800	29
Young Whiskey, at the close of the season, 1821. Young Woodpecker, 1817	23

[Annals of Sporting.]

MISCELLANEOUS.

[From the New York Statesman.]

The following communication from our valuable correspondent "Hopson," should receive the attention of woollen manufacturers, whose interest has been essentially promoted by his instructive essays.

ON STEEPING CLOTH.

Some few months since I gave an account in your paper, of a new process adopted in England of steeping cloth for the purpose of laying the nap, and giving a face which nothing would remove.*

Since that time I have received two letters on the same subject, which give further information on the process.

Instead of the temperature being between 170 deg. and 180 deg. Fah. it should be between 180 deg. and 190 deg. Fah. The cloth should lie in the steep from six to seven hours, in place of two hours.

Further trials have proved that it will answer well on white and wool dyed blue cloth, but not on fancy colours, the latter being liable to change colour at the outside end and against the lists.

The following fact will prove the advantage of giving cloth such a finish. One of our first auctioneers bought a coat, the cloth off a piece he had sold at auction. After the tailor had damped it, he found the polish and face undisturbed; thinking the damping cloth had not been wet enough, he gave it more water and damped the cloth again; finding the face did not start, he examined it closely, and discovered it was so set, that nothing would disturb it. He immediately bought the whole piece, and gives a decided preference to this finish, above all others.

HOPSON.

[* Will Mr. P. please send it to us.]

EXTRAORDINARY FECUNDITY.

Four ewes on the farm of John S. Sellman, Esq. of this county, yeaned this season fourteen lambs, which are all doing well. Two of them brought forth four each, and the other two three each. A few such breeders would soon give a man a flock to watch

[Annapolis pa.]

RECIPES.

CURE FOR THE POLYPUS IN THE NOSE.

In conversation with a friend from the Western country, I have been informed of a fact, too important as it appears to me, to be withheld from the public.

His daughter was troubled with a polypus in the nose, which was extracted by a surgeon but soon grew again to its former size. He heard of the blood-root as a cure, and it was tried with such efficacy, that the polypus shrivelled away in about ten days, and was soon entirely gone.

Another young woman in the same neighbourhood had one so large as to spread her nostrils considerably, and affect her speech. After using the blood-root a short time, the polypus dropped out entire, and she was soon well.

Recipe.—Take half an ounce of blood-root, (*Sanguinaria Canadensis*), finely pulverized, and sift it and one drachm of Calomel. Mix them together for a sternutatory. A small pinch of this powder is to be snuffed up the nostril three times a day; and a syringe of the following wash is to be thrown up the nostril twice a day. Dissolve half an ounce of powdered alum in a gill of brandy, shake the phial until it is dissolved. [Providence pap.]

FROST-BITTEN.

It is said that if a frozen limb be immersed in warm water in which a quantity of alum has been dissolved, the effects of the frost will be entirely removed. The proportion is a pound of alum to a gallon of water.

ASTHMA.

A lady has been entirely cured of a long asthmatic complaint, which resisted other remedies, by taking, from time to time, a spoonful of mustard-seed steeped in vinegar.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 21, 1826.

LEE'S MEMOIRS.—It has long been a matter of surprise that the publick should not have been favoured with a new edition of "LEE'S MEMOIRS." They form, in point of style, an excellent model of military narrative, besides abounding in historical memoranda of great value, and incidents not elsewhere recorded, highly curious and characteristic of the men and the times—whereof the author might well have said *pars quorum fui*, for few acted in that eventful period, a more conspicuous part than he. We know of no military sketches so fascinating as those, for a new edition of which the publick will be indebted to the solicitation of many military men, and to a motive of filial duty which prompts the Editor to furnish, at this time, a correct copy of the work.

The Editor of the Farmer will receive the names of those who may wish to subscribe, for the sake of accelerating the appearance of a work, which paints to the life some of the most critical and interesting scenes of the revolution.

"Proposals for publishing by subscription a new edition of LEE'S MEMOIRS OF THE WAR OF THE REVOLUTION in the Southern Department of the United States; with Corrections left by the Author, and with Notes and Additions by H. LEE, the Author of the Campaign of '81. These last will contain short Biographical notices of Generals Wayne and Pickens. The work will be delivered by Davis & Force, at the city of Washington, in one neat octavo volume, of about 500 pages, on or before the next meeting of Congress, and immediately thereafter in the principal cities of the U. States, at \$2.50 a copy. Subscriptions to be returned to Davis & Force."

We have observed, with great pleasure, in a respectable Gazette of Chillicothe, an extract of a letter from a gentleman in Baltimore to a member of Congress, representing the anxiety of the numerous graziers and distillers in the vicinity of Baltimore, that the drovers of the Western country could bring a portion of their lean cattle to this city for sale; and, at the same time, presenting to their view a prospect of extensive and beneficial uses in the event of their coming to this market. This extract, we are given to understand, has been published in almost all the papers of Ohio. These circumstances, combined with other considerations, induce us to hope that some of the Western drovers will bring their lean cattle to this market, and that there should be such a large number of them as to make it a profitable business.

and distillers should in due time be apprized thereof, so that, relying on this market, they may not go to any other place for the cattle they may want. This would be a market obviously convenient to all purchasers residing in the counties of Baltimore, Harford, and Anne Arundel, as well as to those residing in this city. If any drover will signify to the Editor of this paper his intention of bringing lean cattle to this market, and will specify the probable number and time, the same shall be published with great pleasure, and in a way the most likely to insure a ready sale.

With a view to this facility, it is respectfully hoped that Western editors will be pleased to give this short note a place in their respective papers.

MISTAKE CORRECTED.

DEAR SIR, Steubenville, April 18, 1826.

In looking over a volume of the Farmer (vol. 6, p. 127,) a short time since, I discovered a mistake (made either by the printer or myself,) in the recipe for making currant wine, which I sent you. The proportion ought to be 2 gallons of water to 1 of juice—in the Farmer it is stated 3 gallons of water to 1 of juice, which would make it too thin. I have seen some samples made by the same recipe quite equal to the sample I had the pleasure of sending you.

Yours, with esteem,

JOHN McDOWELL.

JOHN RICHARDS.

The celebrated horse John Richards, will stand the ensuing season at Pennington, Huntendon county, New Jersey.

The prices upon which the services of John Richards will be rendered, are the following—\$15 the single leap; \$20 the season, and \$25 to insure a foal.

John Richards is seven years old the ensuing spring; a beautiful blood, bay colour, with black legs, mane and tail; sixteen hands high; of a remarkably fine, indeed faultless figure, abounding in bone and sinew, with a full bold chest; and in point of strength, unexcelled by any horse in the United States.

John Richards was selected from all the best horses of the south, to match Eclipse in the great race, on Long Island course, in the spring of 1823, but owing to an accident by which the hoof of one of his fore feet, was injured, Henry was substituted in his place.

N. B. Gentlemen who shall send mares from the south, may order them to be left at the residence of BELA BADGER, of Bristol, Pennsylvania, from whence they shall be carefully sent on to Pennington.

April 21, 1826.

FOR SALE

Three Jacks. Fairfax 8 years old, 11 hands 2 inches high, girth 4 feet 8 inches, is well formed and a good foal getter.

Don Juan will be 4 years old on the 3rd of August, is 12 hands 3 inches high, girth 5 feet, in form and appearance is surpassed by no Jack in the state. Fairfax and Don Juan are descended from the Mount Vernon stock.

Leo will be 2 years old on the 18th of May, is 12 hands high, girth 4 feet 6 inches, was got by Colonel Tayloe's Jack, to whom the premium was awarded at the Maryland Cattle Show, in 1822.

J. G. CHAPMAN.

April 21, 1826.

La Plata, Charles county, Md.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8			
BACON, and Hams, . .	lb.	5	8 9	12	
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java,	—	17	18	22	25
Havana,	—	15	18	18	20
COTTON, Louisiana, &c.	—	14	15		
Georgia Upland, . . .	—	11	12 1/4		
COTTON YARN, No. 10.	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12		14	18
Dipt,	—	10		12 1/2	15
CHEESE,	—	8	10	12	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	3 00	3 25		
Shad, trimmed, . . .	—	6 50		8	
FLAXSEED, Rough, . .	bush	75		87 1/2	
FLOUR, Superfine, city,	bbl.	4 00	4 25	5 00	6 00
Fine,	—	4		4 25	
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	68	70		
Wheat, Family Flour, .	—	80	85		
do. Lawler,	—	65	70		
do. Red,	—	80	83		
Rye,	—	65	70		
Barley,	—	80			
Clover Seed, Red . . .	bush	3 87 1/2	4 25	4 75	
Ruta Baga Seed, . . .	lb.	1		2 00	
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	1 50	2 00	2 50	
Oats,	—	40	42	45	50
Beans White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	24		37	
HOGS' LARD,	—	7	8 1/2		
LEAD, Pig	lb.	6 1/2	7		
Bar	—	7 1/2			
LEATHER, Soal, best, .	—	24	25	62	
MOLASSES, sugar-house	gal.	45		62 1/2	75
Havana, 1st qual. . . .	—	26	26 1/2	37 1/2	
NAILS, 6a20d.	lb.	6 1/2		9	
NAVAL STORES, Tar, . .	bbl.	1 27	1 31		
Pitch,	—	2 25			
Turpentine, Soft, . . .	—	1 75	2 00		
OIL, Whale, common, .	gal.	30	31	40	
Spermaceti, winter . .	—	68	70	88	
PORK, Baltimore Mess, .	bbl	11 00	12 00		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	4 75			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, . .	—	5 1/2	7	8	12
WHISKEY, 1st proof, . .	gal.	27 1/2	28 1/2	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	37		50	
SUGARS, Havana White,	c. lb.	13 50		15	16
do. Brown,	—	9 00	9 50		
do. Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	25
SPICES, Cloves,	—	70	75	1 00	
Ginger, Ground,	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes,	bush	43	45		
Liverpool Blown	—	47	47 1/2		
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 20	1 30	2 00	
Lisbon,	—	1 15	1 25	1 50	1 7
Claret,	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40		
do. crossed,	—	28	30		
Common, Country, . .	—	25			
Skinners' or Pulled, . .	—	33	35		

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AGRICULTURE.

ON THE MANUFACTURE OF BUTTER
AND CHEESE.

By S. De Witt, Esq., of Albany.

(From the 3d [last and best] vol. of the Memoirs of the
Board of Agriculture of the State of New York.)

[EXTRACT.]

On the subject of manufacturing butter I cannot refrain from saying something more. It will be simply concerning the operation of churning. I last summer visited a farmer near Ithaca, who kept a dairy, supplied by about sixteen cows, and conducted in the manner I have been accustomed to see in Ulster and Orange, as described in my communication for the Plough Boy; the butter from which commanded a higher price than any other in that part of the country. The working of the churn was done by a dog. The machinery for this purpose was simple. It consisted of a circular platform inclined to the plane of the horizon, and moving on an axle through its centre. The dog was placed on it near its edge, with a rope fastened round his neck and attached to an adjoining fixture. In this situation, the platform being put in motion, the dog was obliged to perform the operation of walking on it upwards; by which means the motion was continued, and by means of a simple contrivance communicating with the churn-stick, the churning in this manner was performed and completed in about an hour; when the dog was dismissed and received his customary reward, a plentiful repast on milk, &c. Thus treated, he returned to his labour with alacrity when it was again required. The churn held of milk and cream put together in it, about the contents of a barrel. I staid during the process of one churning, and was highly gratified with it; and what contributed much to my gratification was the delicious beverage of buttermilk with which the mistress of the dairy treated me.

As having not a very remote relation to dairies, some remarks on *pastures* and *meadows*, will not be out of place here. With regard to these, we have in this country availed ourselves but little of the precepts founded on a thousand years' experience beyond the Atlantic, where their value is duly appreciated, and the fruits of them are fully enjoyed. There we are taught, that in order to have good pastures or meadows, no pains or expense must be spared to enrich the soil where that is needed, to destroy as far as possible by a suitable course of husbandry, every weed and plant that previously occupied the field; to have the ground perfectly pulverized by ploughing and harrowing, and then to sow on it a plentiful quantity of grass seeds suited to the soil, and of those kinds which have been proved to be the best for those purposes. The fault I mean to find with our practice contrasted with that of the English is this—for pasture or meadow we sow in the spring of the year, on a field of winter grain, a small quantity of grass seed, from which we expect our future pastures and meadows, and trust to their branching out in two or three years so as to make tolerable pastures or meadows. In the meanwhile other grasses and weeds spring up so as to occupy most of the ground; and this is most notoriously the case in our new country, where the seeds of thousands of varieties of plants lie in the ground ready to spring up and overcome the growth of artificial grasses. In order to prevent this, the English practice before described is the more necessary here. The aboriginal weeds must first be destroyed by preceding crops, especially by those which require the use of the hoe, and then such a quantity of clean well selected grass seeds must be sown as will cleverly fill the ground, and in their growth smother every other vegetable. For this purpose too much seed cannot be put in the ground at once.

The practice of putting a small quantity of grass seed on ground laid down for pastures or meadows, is one of the greatest errors in the husbandry of our country. On this subject I wish that our farmers would consult a book published in London, called the *Complete Grazier*. It gives recipes for the kinds and quantities of seed per acre proper to be sown on all the varieties of soils; such as *clay, loam, sand, chalk, peats, up-lands, mid-lands, low-lands*.

As a sample, I will copy the recipe for an acre for low-lands:

Meadow Fox-tail,	2 pecks
Meadow Fescue,	2 do.
Rough-stalked poa,	2 do.
Ray grass,	1 do.
Vernal grass,	1 quart.
White clover,	2 do.
Marl grass,	2 do.
Rib grass,	2 do.

In the recipes for the various soils, the quantity of seed is generally about a bushel per acre. Let this be compared with our practice.

Here it is proper to be observed, that in laying down grounds for pasture lands, the English select the seeds of such grasses as will come to maturity in succession; but I think they carry this scheme to excess, and that there is no necessity for a mixture of such a variety of seeds to be used for these purposes. In our country the most esteemed grasses are—white and red clover, timothy or herds' grass, the red top, and foul meadow. With these some other indigenous grasses intermix, the merits of which deserve to be investigated. Our best grasses for meadows are unquestionably the timothy, the red top, and foul meadow. The merits of this last mentioned grass are not generally known, and I suspect it to be the best, for low alluvial soils, to be found in our country. It appears to me to be a variety of the red top, *Agrostis vulgaris*, and preferable to it, being more delicate in its structure, and having leaves more slender, longer, and in greater abundance. I have been told by an acquaintance from Orange county, that it is chiefly used on the reclaimed drowned lands there, and preferred to all other grasses, and that it yields most abundant crops. I know from my own observation for a number of years, that without any artificial preparation, it has gradually supplanted the coarse aquatic grasses on the lower parts of the low-lands at Ithaca. There can be no better hay than that which is made of it. On a rich, moist soil it will grow uncommonly dense, and I should think would yield as much from an acre as any other of the best cultivated grasses.

In order to make a good meadow on a rich soil, I would recommend this practice. Destroy all the weeds and natural grasses by ploughing, harrowing and suitable crops. Prepare the ground by sufficiently pulverizing it, and then sow on it so much timothy seed as that the growth from it shall immediately cover the ground, at least, as thick as a field of flax. This then will give you clear, abundant crops of timothy, to the exclusion of every other grass. Or if the ground be inclined to moisture, use foul meadow seed in the same manner; or make use of a mixture of timothy and foul meadow; at all events be not sparing of seed, and immediate abundant crops will be the reward. Timothy and foul meadow, or red-top, I consider as the best of any known grasses for our low-land meadows, and the more every other kind can be kept out of them the better. Some of the English grasses may be advantageously used in laying down permanent pasture grounds; but white clover and timothy are the best in use among us. Red clover is to be preferred for soiling and enriching the ground, when fallowing is intended. By means of it, with the assistance of gypsum, the poorest soils can be made valuable.

I have said that *too much seed cannot be put in the ground at once*. Every body knows what a small quantity is generally used, and how long it is before lands laid down as pastures or meadows come to perfection, and how they are injured by grasses of spontaneous growth, which ought not to be there; but for which the greater part of the surface of the ground is left by the stingy sower. In confirmation of the propriety of these remarks, I will make further quotations from the *Complete Grazier*.

"The following proportions were sown a few years since by the Earl of Darlington:

White, or Dutch clover	17 lbs.
Clean hay seed,	14 bushels.
Rib grass, }	
Trefoil, }	14 lbs.

By which means (the soil being previously ploughed very fine, and made perfectly level,) the land was speedily covered with a thick and excellent herbage. The only exceptionable thing in this practice is the quantity of seed, which is certainly too large for a statute acre."

The last remark, I presume, means an unnecessary waste of seed, not that the quantity used was an injury to the production of the field.

"Mr. Dalton's mode of laying down land to grass is, to make the ground perfectly smooth and level, and then sow upon every acre the following seeds, viz:

Hay seeds,	6 bushels.
Rib grass,	12 lbs.
White, or Dutch clover,	8
Burnet,	5

He manures it with a compost of earth, dung and ashes thoroughly mixed together, and folds his sheep upon it, &c. The proportion of seed, however, is still too great, though in other respects his management be excellent."

"In the laying down of land for the purpose of forming a good meadow, greatly superior to the generality of pastures, the late Mr. Curtis recommends the following grasses, and two species of clover to be mixed in the following proportions:

Meadow fescue grass,	1 pint.
Meadow fox tail grass,	1 do.
Rough tailed meadow grass,	½ do.
Smooth-stalked meadow grass,	½ do.
Crested dog's-tail,	½ do.
Sweet-scented spring grass,	½ do.
White, or Dutch clover,	½ do.
Common, or red clover,	½ do.

"These are to be mixed together, and about three bushels of them sown on an acre."

Such appears to be the practice where agriculture has been growing towards perfection, aided by all the efforts of man, and the acquisitions of science and experience, assiduously and constantly applied for its amelioration, for more than a thousand years. Now let the practice in our country be considered. With the reflection of this light on it, how most wretched does it appear!

How far the grasses of Europe are proper for our country, experience must decide. We know that one of our best grasses, timothy or herds' grass, cannot be cultivated to advantage in England, and sufficient experiments have not been made, or if made, not recorded, to ascertain which of the English grasses would be an acquisition in our practice of husbandry. Nor have the proper researches yet been made to ascertain what additions may be made to our pastures and meadows, by the introduction of the grasses on which our cattle subsist in their ranges in our forests. For this purpose I would advise, that a botanist should turn a horse or cow, not starved, but with an appetite rather sated, into the woods, at a proper season of the year, and observe the grasses which the animal would select for his food. By this means some might be discovered which would make valuable

additions to those used with us for our pastures or meadows.

I have met with a remark in some English treatise on the subject under consideration, that "a good pasture is too valuable ever to be broken up." If this be the case, let the man who undertakes to prepare a dairy farm, soliloquize in this manner, when he is preparing his pasture fields:—I am now about doing what is to be done only once in my life-time, on the farm from which I am to obtain my living; therefore let no pains or expense be spared to have it done in the best possible manner. I will plough, harrow and hoe my field, and raise such crops on it as are best calculated to destroy every kind of vegetable now growing on it. I will make use of every means that can be contrived to enrich the ground. I will pulverize the soil, and level it as much as possible, and then I will make a selection of the best and most suitable grass seeds, and sow them in abundance on it, remembering that *I cannot sow too much* in order to have full crops immediately, and to prevent the growth of noxious plants; and if any of these should notwithstanding spring up, I must go over my fields and eradicate them, and in a few years I will have a good clean pasture, which will last my life-time, and be retained in the highest state of perfection by means of occasional top dressings, or by scattering some pulverized gypsum over it, and sometimes, perhaps, by a scarification, all which will cost me but a trifle compared with the benefits I will receive from them.

The late Gouverneur Morris had several dairy establishments on his estate at Morrisania. On the exquisite flavour of the butter they produced I have often feasted at his table. In rambling over his fields and visiting his dairies, among the numerous instructive observations he made on agricultural subjects, one was new to me, and I considered it worthy of being remembered, and of having the truth of it investigated. It was this—"The older the pasture, the better will be the milk and butter which it produces." Whether this be correct or not, I cannot, from my own experience or observation decide, further than this, that some of the most luxuriant pastures about Morrisania, appeared to be very aged, and I knew that the butter they produced was most excellent.

In closing this communication I shall make one further remark. The subjects on which I have touched must be confessed to be important. They stand related to the essence of our highest interests, the productions of our soil. These are to create our wealth, and all our enjoyments thence to be derived. They are therefore deserving of a primary attention. Have the English, who are our school-masters in husbandry, taught us what is suitable to their soil and climate, they have not taught us what is suitable to ours. This is a task belonging to ourselves and deserving of all our application. Let then every practicable method be adopted for ascertaining what grasses are most proper for the pastures and meadows of our country, and what seeds or mixtures of seeds are the most suitable for our various soils. This is a business that should not escape the attention of our institutions, created expressly for the purpose of meliorating the agriculture of our country.

The following are the articles above alluded to!*

(To be continued.)

ON THE ART OF BREEDING.

MR. EDITOR,

Philadelphia county.

In looking over, a few days since, the Memoirs of the Pennsylvania Agricultural Society, I observed an essay, which has been transferred to the American

* These will be given in our next.

Farmer, on the "Art of Breeding, by Sir John Sebright," and introduced into the memoirs at the suggestion of a gentleman belonging to the society, who says that the essay "evinces a perfect knowledge of the art of breeding." As Sir John appears to me to have fallen considerably short of perfection, in his reasoning on this subject, I thought that it might not be useless to examine into the correctness of a few of his opinions.

The first sentence upon which I wish to remark, is as follows: "It is not always by putting the best male to the best female, that the best produce will be obtained; for should they both have a tendency to the same defect, although in ever so slight a degree, it will in general preponderate so much in the produce, as to render it of little value." First: as to the theory of the matter. What foundation has Sir John for this opinion? Is not the whole art of breeding founded upon these two plain principles—first, that in nature there is a strong tendency for like to produce like; and secondly, that there is a slight tendency to change? From which of these principles does the baronet draw his conclusion. The probability is, that the greater number of the produce would possess the defect specified in the same degree with the parents; that some would possess it in a less degree and some in a greater. But to refer to experience and practice: Do we really find Sir John's position to be true? One instance will be sufficient. With respect to sheep, the black colour in the wool is generally considered to be a defect. Now, all well bred Southdown sheep have dark faces and dark legs; yet I have never heard of any breeder expressing an apprehension that the black colour would, in three or four generations, extend gradually from the face to the very tip of the tail. On the contrary, a black body or a white face would be considered, either as showing a deviation from the blood, instead of proving that they had been too closely bred in—or else, as an instance of the slight tendency to change already mentioned, and which the breeders are careful to counteract. On the next page he observes: "If a breed cannot be improved, or even continued in the degree of perfection at which it has arrived, but by breeding from individuals so selected as to correct each other's defects, and by a judicious combination of their different properties, (a position, I believe, that will not be denied,) it follows that animals must degenerate, by being long bred from the same family, without the intermixture of any other blood, or from being what is technically called, bred in and in." The most remarkable thing about this sentence, is the total absence of all logical connexion between the premises and the conclusion. Before the conclusion can be established, it must be shown that there can be found no individual in the particular family under consideration, exempt from the specified defect; which would be to suppose that nature shows an *invariable* tendency for like to produce like; which is false, and would also strike at the root of all improvement in breeding, at once. The writer then quotes the practice of the celebrated Bakewell, who, he informs us, asserted that he acted on the principle of breeding in and in. But Sir John gives us to understand, that Bakewell was addicted to telling fibs about his stock. Upon what authority he says this, he has not informed us. He mentions also a breeder of fox hounds, a Mr. Meynel, and observes: "Mr. Meynel sometimes bred from brother and sister; this is certainly what may be called a little close; but should they both be very good, and particularly, should the same defects not predominate in both, I do not think it objectionable: much farther than this, the system of breeding from the same family, cannot, in my opinion, be pursued with safety." Here the writer grants that brother and sister may be found in the same family, not possessing the same defects; the reverse of which appears to be implied in the last sentence quoted from

him. But further, what does he mean by the junction of brother and sister not being objectionable? Unless the produce upon the whole are equal to the parents, it certainly would be objectionable; and if equal, what objection can there be then to their junction also, under the same restrictions in regard to similarity of defect.

"Although I believe the occasional intermixture of different families to be necessary, I do not, by any means, approve of mixing two distinct breeds, with the view of uniting the valuable properties of both.* If it were possible, by a cross between the Leicester and Merino breeds of sheep, to produce an animal uniting the excellences of both, even such an animal, so produced, would be of little value to the breeder; a race of the same description could not be perpetuated." Here the writer, with respect to the perpetuation of the breed so obtained, besides going contrary to common observation, contradicts what he says in another part of the essay, where he speaks of varieties of domestic birds obtained, and continued, solely by the art of man.

This subject of breeding in and in, has long been what a lawyer would call one of the "moot points" in the theory of agriculture. The opinion of the necessity of change, has always been held by many, not only with respect to brutes, but also with respect to vegetables, and even with respect to man himself. As to vegetables, I think that any person who will read a communication on the subject, by the late Joseph Cooper, of New Jersey, published in one of the volumes of Memoirs of the Philadelphia Society for promoting Agriculture, will say that he has, at least, made a very strong case against the theory.† With respect to the human race, I have understood that the opinion is no longer held by modern physiologists. Indeed, we read of a nation situated near Mount Lebanon, in Palestine, who have always permitted marriage between brothers and sisters; and yet they are represented by travellers as being a very hardy vigorous race. I allude to the Druses. **CECROPS.**

CHICORY.

[This grass possesses, as we are inclined to think, a value far beyond its general reputation. We find the following notice of it in Dickson's Farmer's Companion. We once saw it growing very luxuriantly at the residence of the late lamented Judge Holmes, of Winchester, Va.]

CHICORY.†

This is a herbaceous plant of the succulent pe-

* In a communication from the gentleman who considers the essay under review as "evincing a perfect knowledge of the art of breeding," inserted in the same volume of Memoirs, he informs us that he has crossed the broad-tailed sheep with the sheep of Dishley blood, in the expectation of obtaining the good qualities of both without the defects of either! A celebrated breeder in England, in writing to Sir John, observes with respect to this very point. "I have seen much of crossing, but never yet saw the accomplishment of an object so desirable, as the full attainment of the good properties in each, without any mixture of the bad. Indeed, it must be obvious that there is no more reason to expect a perfect union of the former, rather than the latter." With respect to the perpetuation of a cross so obtained, the writer last quoted remarks—"I shall inquire, secondly, whether a cross from two distinct breeds can be obtained and continued, so as to unite in an almost equal degree the properties of both; and I am fully of opinion that this can be accomplished;" and he then goes on to mention instances in which it has been done.

† [That paper will be published in the next number of the American Farmer, from the 1st vol. of the Memoirs of the Philadelphia Agricultural Society.]

‡ *Cichorium Intybus*.—It is likewise known by the title of Wild Succory.

rennial kind, that has been lately introduced into cultivation for the purpose of affording green food for the summer support of different sorts of live stock. It seems to have been first fully brought to the notice of agriculturists by the experiments and observations of Mr. Young, detailed in his very useful work, the *Annals of Agriculture*. The plant is, however, supposed by Professor T. Martyn, in his edition of *Miller's Dictionary*, to be a highly improved variety of common succory; as in its wild state that plant is dry, hard, and without much succulence. It is capable of being grown on most of the loamy descriptions of soils, and even in some of the more light brashy sorts of lands, and other poorer kinds, but succeeds the most perfectly in such as are not too much retentive of moisture. The former of the above writers say, that it affords a large supply of sheep food on poor blowing sands; and that with a portion of cock's-foot grass and burnet, it will form a layer for five or six years, better than from trefoil, white clover, and ray-grass. It also thrives to much profit on fenny, boggy, and peaty lands; and where clover is worn out, it likewise answers well.

In respect to the preparation of the soil, it is probably less particular than many other similar plants, but answers in the best manner where the land is in a tolerable state of fertility, and has been rendered in some degree fine and mellow. When it is put in with other sorts of crops, the same kind of preparation must be employed; but when sown alone the ground should be rendered fine by two or more ploughings at suitable seasons, according to the nature of the soil, and repeated harrowings.

Seed.

This is the best when collected from the plants by the cultivator, as, like most other sorts, it is liable to be mixed in the shops. It vegetates in the most perfect manner when new.

The quantity of seed which is necessary for the acre, must as in other sorts of crops, of course vary according to the nature of the land and the intentions of the farmer; but the usual proportion, whether sown alone or with grain in the spring, is from ten to twelve pounds. In the row method of sowing, at the distance of a foot, from seven or eight to ten pounds may, however, be fully sufficient. As the plant is not of the tillering or spreading sort, a full proportion of seed should, however, constantly be put in, that the ground may be well covered with herbage.

Time and method of Sowing.

The period of putting in chicory crops must be regulated by the method in which the business is performed, and the views of the cultivator. When it is sown without other sorts of crops, the work may be executed at any time from about the middle of March till the latter end of the summer; but with corn it must depend on the season they are put in. It is sown with both oats and barley, but the first will obviously admit of the more early sowing. From the plant being hardy, it should, probably, be put into the soil as early in the spring as possible. Mr. Young found it less liable to be injured by grain crops than other sorts of grasses, and to succeed well with most of them.

It is mostly sown in the broadcast method, after the surface has been rendered fine and covered in by a light harrowing. But from its growing with the greatest luxuriance where it is the most open and has the greatest benefit of free air, it is suggested as well adapted to the row method of cultivation. In which case it may be drilled in at nine inches on such lands as are of the poorer kind, and twelve in those that are more fertile, being harrowed in by one bout of the harrow.

After-management.

Where the crop has been put into the ground in

the manner directed above, little attention is necessary afterwards, especially when cultivated in the common broadcast method; but where drilled in rows, the use of the hoe will be required to keep the intervals as well as the plants in the rows clean, and the ground well stirred.

Crops of this plant from the great quickness and luxuriance of their growth, are capable of being repeatedly cut in the summer months, for the purpose of soiling horses and other sorts of stock. It should not, however, be cut more than once or twice the first season; but in the following summers the operation may be performed three or four times according to circumstances. Mr. Young advises four cuttings in order to prevent the stems from running up too much and becoming dry, sticky, and less nutritive. The proper times are to begin about April or May, and to continue it every other month till October.

Its produce when cut green is large, affording, in Mr. Young's trials, upon the average of four years, thirty tons to the acre: this is probably, however, a larger produce than the plant is capable in general of affording.

It is not only in favourable seasons that this coarse juicy plant can be made into hay with success: nor is it well suited for the purpose, being of much greater advantage when consumed in its green state. Its produce in this way is stated at from three to four tons the acre. This sort of hay is, however, asserted to be nutritious.

When left to run up to stem and seed the produce is considerable, amounting in the third year, to more than four hundred weight on the acre.

The most useful application of this sort of crop is probably feeding cows and other sorts of cattle, and the soiling of these as well as horses, as it springs more rapidly than either sainfoin or burnet; but it is likewise found to answer admirably for pasturage for sheep; as it is less injured by close feeding than many other plants.

"In a comparative experiment made on a small piece of land of a wet, sandy, friable, loamy soil, with marly bottom, drained, on a cabbage preparation, sowed oats with chicory and various other seeds—the oats were mown at harvest, but had only been used as the means of laying down: in May, when the grasses were mown and weighed green, those with chicory were most productive. No rain fell till the 11th and 12th of July, when it was very heavy. On the 14th of this month cut the chicory crop; the others had not any thing worth mowing. In August, cut all again, when the chicory crop had much the advantage in quantity. In the after-grasses also, the chicory was the only one productive." From the whole of the experiment it appears that the superiority of chicory in general, over other plants in general, is very considerable, which is a circumstance principally to be attended to.

As a very large proportion of green food is afforded by this plant at a period, when it is not otherwise easily obtained, its uses in soiling cattle or animals, is evident.

In a comparative experiment of stall-feeding eight beasts with tares and chicory, it appears that on putting to tares only from May 25 to June 21, they gained 49½ stones; weighed again 6th July, gained 17 stones: on this weighing they were put to chicory, the tares and that both being given to them; weighed again 13th July, only one week afterwards, and had gained 27½ stones, or an advantage of about 8s. 7d. per head per week.

Its utility for the purpose of pasturage is fully shown by other statements.

On an experiment being made with ten pounds of this seed over five acres, in a good strong wet loamy soil, sown with barley among clover, trefoil, rib-grass, burnet, &c. in order to remark in the pasturing whether sheep and cattle would eat it as well as those other grasses; it was viewed during

part of three years, particularly in the first after the barley was cut, when a fine ilee bage was produced: the two following years mown by the farmer, and fed through. It proved by the result that the chicory was eaten by sheep, cows, and fatting bullocks: to the ground as any of the other plants. When horses were in the field, no remark was made whether it was eaten by them; but in the stall they ate it with avidity.

Mr. Martin found it an excellent summer forage for store sheep, whether mixed with or alone, especially on dry soils and in mers, as from its tap root it receives no moisture from a great depth, affords a large quantity and bears eating close without any drought affecting it: it should always be eaten. It may not be proper in feeding pastures, as the must have abundance of food; for in the stall it would send up the seed-stalks too much, would not eat it, and by its luxuriant growth might damage the finer grasses.

On a brashy soil, the Duke of Bedford found the produce of an acre sown with this food year supported seven new Leicester sheep 22 lbs. the quarter, for six months; and is that, on the same land, no other artificial would have equalled it.

There are some other plants occasionally used as a green food for cattle; such as *Polygonum fagopyrum*, and winter bari.

And it seems probable, from some trials have been lately made, that the latter, as extremely hardy, and affording an abundant supply may be grown with much more advantage for the purpose of soiling an important part of stock, than the former.

SAXONY SHEEP.

At the sale of Saxony sheep, by auction, took place at Albany last Friday, seven 1 at from \$150 to \$210, and 14 ewes, at the price of about \$60. This price, as appears from the following article from the Albany Argus, far below what was considered their fair value, the sale was stopped.

"SALE OF SAXONY SHEEP.

"An effort was made in this city on Saturday to make sale by auction, of a flock of Saxony sheep. The selection, it is said, had been made with care; and the arrangement of the sale and ewes in eight different pens. The price on which they were offered, &c. were considered judicious, and well calculated to effect a sale. It is a matter of regret that the proprietors were much discouraged with the bids for the sheep, were struck down, after two attempts made in the afternoon, as to induce them to postpone until to-morrow morning, when it will be near the capital. When the value of the sheep and the facilities which our inland navigation afford for its easy introduction into every part of the state, are considered, it will be a matter of regret if this first attempt to bring them to the notice of our agriculturists, should prove so discouraging as to forbid any future effort of the kind."

HORTICULTURE.

SEA-KALE.

Directions for cultivating the *Crambe Maritima* Sea-Kale, for the use of the table. By Curtis, author of the *Flora Londinensis* on Pasture Grasses, and a variety of wading, &c.

The *crambe-maritima*, is found growing spontaneously, though locally, on the sea-shore

land,* as well as of many other parts of Europe; preferring the dry and pebbly to the moist and sandy beach.

This plant is of the same natural class as the cabbage, but differs from it and most of the *Tetradynamous* plants of Linnaeus, in having a round seed vessel, containing one seed only; it has other generic distinctions, some of which are striking and curious;† its root is perennial, running to a great depth, growing to a great thickness, and branching out widely, but not creeping, in the proper sense of that word, as Parkinson, Miller, and Bryant, have described it; its full-grown leaves are large, equaling in size, when the plant grows luxuriantly, those of the largest cabbage, of a glaucous or sea-green hue, and waved at the edges, thick and succulent in their wild state, dying away and disappearing entirely at the approach of winter.‡ Seedling plants, if raised late in the spring, produce the first year radical leaves only, the second spring most of them throw up a flowering stem, a foot or more in

* This herbe groweth at Dover, hard by the sea-side, and in many other places.—I name it *Brassicam Dobricam*, in English, Dover Cole, because I found it first beside Dover. *Turn. Herb.*

† *Præter hasce, est etiam perquam pulchra Brassica, sylvestris Dioscoridis specie diversa, locis oriunda Angliæ maritimis ad Portlandiam insulam. Lob. adv. 93.*

Growth naturally upon the bayche and brimmes of the sea where there is no earth to be seen, but sand, and rolling pebble stones, which those that dwell near the sea do call bayche. I found it growing between Whitstable and the Isle of Thanet, near the brincke of the sea, and in many places near to Colchester, and elsewhere by the sea-side. *Ger. Herb.*

Grows in many places on our own coasts, as well the Kentish as the Essex shore, as at Lidde in Kent, and Colchester in Essex. *Park. Th.*

Found wild by Hastings, in Sussex, plentifully. *Merr. Pin.*

In arenosis maris littoribus circa Angliam ubique fere. *Rait Syn.* We have not found it growing so generally as Ray describes.

On the sea-coast, in sandy or stony soils, but not common; on the shore by East-Castle, Berwickshire, Dr. Parsons. *Lighf. Scot.*

At Roosebeck, in Low-Furness, Lancashire, Mr. Woodward: near Megavissey, Cornwall, Mr. Watt. *With. Arr. ed. 2.*

† Habitat ad littora oceani septentrionalis. *Linn. Sp. Pl.*

‡ In Prof. Murray's Syst. Veg. the seed-vessel in the generic character is thus described, *Bacca succa globosa decidua*; thus in Gmelin's Syst. Nat. is altered to *Pericarpium simplex, globosum, deciduum, 2-articulatum*, some of the species having been found with two colls, as the fruticosa; but this plant not having the forked filament, fig. 1, so peculiar to this genus, Prof. Murray doubts whether it ought not to be regarded as a *Myagrum*, and thinks that both the genera might, with more propriety, be referred to the order *Siliculosos*, where every student would expect to find them.

§ If the main root, or any of its remoter branches be divided into a number of pieces, each piece will grow if committed to the earth; and as it is impossible to dig about the widely-extended roots of these plants without dividing many of them, and leaving a number of fragments in the earth; plants unavoidably arise from such, around the original, and give to it the appearance of having creeping roots; but though in fact they are not so, the multiplication of the plant by the necessary process of digging, renders it in some grounds a troublesome weed.

|| Authors describe a variety with jagged leaves, such we have not seen, but have frequently raised a green variety from seeds.

¶ Parkinson, perhaps, never committed a more egregious blunder, than in the account he has given of this part of the plant's economy: "the root is somewhat great, and shooteth forth many branches under ground, keeping the green leaves all the winter." Bryant in his *Fl. Diet.* misled perhaps by this account, says, the radical leaves being green all the winter, are cut by the inhabitants where the plants grow, and boiled as cabbage, to which they prefer them.

height, which expanding into numerous branches, forms a magnificent head of white, or cream-coloured flowers, having a honey-like fragrance; these if the season prove favourable, are followed by abundance of seeds, which ripen about the end of August.

As an article of food, the *crambe-maritima* appears to be better known here than in any other part of Europe, it is in this country only that its value is rightly appreciated, and its culture truly understood, but even here it is as yet far from being an object of general cultivation.

Since the above was written in 1799, the sea-kale has been introduced into every private garden, where a regular gardener is kept, and it is grown for the market by the commercial gardeners of London, Edinburgh, and Glasgow. Many consider this vegetable equally delicate as asparagus, and it is raised at one-fourth the expense of that plant; because it comes into use one-fourth of the time sooner. It is also much easier forced than any culinary vegetable whatever, and no gentleman who can afford one load of fresh horse-dung per month from November till April, need be without a dish of sea-kale every day from Christmas till May or later.

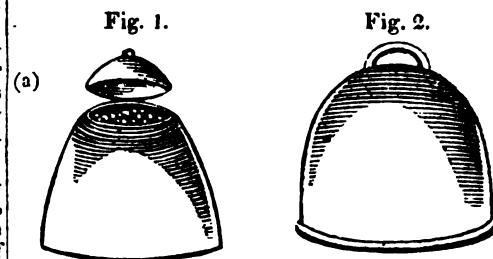
It would be very difficult to ascertain the precise period of its being first used with us as a culinary plant: on many parts of the sea-coast, especially of Devonshire, Dorsetshire, and Sussex, the inhabitants, for time immemorial, have been in the practice of procuring it for their tables, preferring it to all other greens; they seek for the plant in the spring where it grows spontaneously, and as soon as it appears above ground, they remove the pebbles or sand with which it is usually covered, to the depth of several inches, and cut off the young and tender leaves and stalks, as yet unexpanded and in a blanched state close to the crown of the root, it is then in its greatest perfection; when the leaves are fully grown, they become hard and bitter, and the plant is not eatable; the more curious, desirous of having it near at hand, and in their more immediate possession, have now in many of the maritime counties introduced it to their gardens, and in Devonshire particularly, almost every gentleman has a plantation of it for the use of his table; it has for many years been cultivated for sale in the neighbourhood of Bath; and my friend, Mr. Wm. Jones, of Chelsea, tells me, that he saw bundles of it in a cultivated state exposed for sale in Chichester market, in the year 1753. I learnt from different persons, that attempts had been made at various times to introduce it to the London markets, but ineffectually: a few years since, I renewed the attempt myself, and though it was not attended with all the success I could have wished, I flatter myself it has been the means of making the plant so generally known, that in future the markets of the first city in the world will be duly supplied with this most desirable article.

It is to be observed, that the sea-kale is delicate eating only when young, and that it is highly improved by being blanched; in the cultivation of this plant it becomes necessary therefore to blanch it before it is fit for the table; to effect this, it must be covered in some way or other, before the flowering-stem, which constitutes the chief eatable part, and its attendant leaves, shew the least sign of emerging from the crown of the roots.

The most generally approved mode of blanching at present is by covering each plant or stool of buds with a blanching pot (fig. 1.) consisting of a top and bottom, and of 12 or 14 inches diameter and height. When the stalks are supposed sufficiently blanched the top (a) is removed, and the hand introduced to cut off the stalks; it is then replaced as before. Two advantages attend this mode; first the dung or other matter usually applied for forcing or blanching does not affect the flower of the kale,

and secondly there is no danger of injuring unripe or other stalks by the operation of gathering.

Many cover with large flower pots; or bell shaped earthen pots (fig. 2.) 12 or 15 inches diameter,



and a foot or more in height: both which come cheaper than utensils with moveable tops; others place a long narrow frame or frames of wicker-work over each row, and cover it with mats or litter, but none of these practices are so convenient and neat, or in the end so economical, as the mode by earthen covers with moveable tops (fig. 1.)

Cultivators differ widely in their plan of treating this plant: many conceiving that stones, or gravel, and sea-sand are essential to its growth, are at the expense of providing it with such, not aware that it will grow much more luxuriantly on a rich sandy loam, where the roots can penetrate to a great depth, without reaching the water, in which if they are immersed they are apt to rot; the plant will indeed succeed in almost any soil, provided it be dry; its luxuriance will depend chiefly on the manure with which the soil is enriched.

Mr. Thomas Barton, a gardener in Lanarkshire, finds the sea-kale does remarkably well on a "pretty strong loam with a loose till bottom." This he prepares by trenching and mixing with rotten dung and vegetable mould. *Caled. Hort. mem. vol. ii. p. 99.*

Mr. Maher who has paid much attention to the culture of this plant, and written a valuable paper on it, says, every thing as to strength, depends on the dryness of the bottom and the richness of the soil; and every thing as to flavour, on the manure used being applied in a perfectly decomposed state, like mould:—decayed leaves, he says, are much to be preferred.—*Hort. Trans. vol. i.*

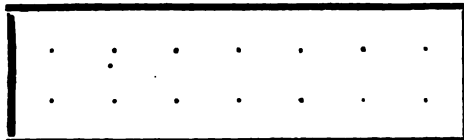
The most useful mode of raising the sea-kale is from seed; it may also be raised from cuttings of the root, and that with the greatest certainty, but seedlings make the finest plants; some find a difficulty in making the seeds vegetate, this we attribute to their being old, buried too deeply in the earth, or sown too late in the spring; the most proper time for sowing the seeds is in October or the beginning of February, while the earth for the most part is in a constant state of moisture, and an inch and a half, or two inches, is the proper depth at which they should be buried; they rarely vegetate in less than six weeks, after being sown even in the most favourable seasons, and they are known sometimes to remain 12 months or more, without shewing any signs of it; should the season prove unusually dry, it will be necessary to water them as occasion may require.

It is the best practice to raise your plants immediately from seed, on the bed where they are intended to remain; by this means the plant receives no check to its growth.

This point all are agreed on. The sea-kale does not transplant well, and grows so rapidly from seed, that in forming a plantation nothing is gained by transplanting. Transplanting old plants for forcing is a different thing; in that case the roots are to be considered as bulbs, or store-houses, containing a certain quantity of nutriment. All that is wanted is to make them give out this quantity in the form of shoots, to be gathered as they appear; not that they should root into, or fix themselves in the soil for fu-

ture growth. As soon as they have produced what they had in store, they are only fit for the dung-hill.

When you have formed your bed, which should be raised somewhat above the level of the ground, and wide enough to hold two rows of plants abreast, the space between each plant in the row fourteen inches, and between each row a foot and a half; sow



about half a dozen seeds, as before directed, on each spot where your plant is intended to remain; this number is directed to guard against accidents, every seed may not vegetate, and some of those that do may be destroyed by the turnip fly or wireworm; should all of them succeed, they are easily reduced to a single plant; this reduction, however, need not be made too hastily; during summer your bed of course must be kept perfectly clear from weeds.—If, for the sake of a more certain crop, you are disposed to make your plantation of the cuttings of the roots, you must take such as are of the size of the ring-finger, and cut them into pieces of about two inches in length, burying each in an upright position about three inches under ground, in the same kind of bed and at the same distances as you would have sown the seeds; the middle of March will be a proper season for doing this. Or if, for the sake of forwarding your plantation and gaining time, you make use of plants instead of seeds, or cuttings, they should be those of a year old, properly trimmed and transplanted with care; February and March will be also the most proper months for transplanting of these; if their flowering stalks be cut for food the same season, the plants will be liable to be weakened, and hence even in point of time, there is little gained by using such, for most of the seedling plants in your bed, if they have been properly managed, as well as your plants from cuttings, will flower, and, of course, be fit to cut the second year.

Early in December cover your bed with a thick coat of rotten dung, or leaves; this at the same time that it protects your plants from frost, will bring them forward, and add to their luxuriance; about the middle of February it will be necessary to cover your plants for blanching, the old mode of doing which was to draw the earth up with a hoe over the crown of the root, so that each plant was covered to the depth of ten or twelve inches; some blanched it by heaping on the plant sea sand, small pebbles, or coal-ashes, and others with a large garden pot inverted, and placed immediately over the plant stopping up the hole at the bottom; and this last is perhaps the neatest and cleanest mode next to the two by covers made on purpose, as already recommended, (page 44.)

The finest, or at least the largest sea-kale, is that which is produced from seedling plants, the first year of their flowering, as the great produce of the plant then centers in one flowering stem; afterwards the crown of the root ramifying into many heads, a greater number of stalks are produced, which are more slender but not less delicate.

When your plants have been covered a month, or six weeks, you must examine some of them, and if you find that the stalks have shot up three or four inches, you must begin cutting; should you wait till all the shoots are of a considerable length, your crop will come in too much at once; for in this plant there is not that succession of growth which there is in asparagus; you may continue cutting till you see the head of flowers begin to form, and if at this time you uncover it entirely, and let it proceed to that state in which broccoli is usually cut, and use it as such, you will find it an excellent substitute, and this greatly enhances the value of the plant, as bro-

coli is liable to be entirely destroyed in severe weather, but this plant never. If your plants have been blanched by earthing them up, you may now level the earth of the beds.

(To be continued.)

RURAL ECONOMY.

SMOKY CHIMNIES.

The following article is, the first moment we come across it, republished in our columns for the benefit of the people of the United States, and if on trial it answers the description, we shall think we have been the means of making known, or rather of extending the knowledge of one of the most comfortable discoveries of the times. This same secret however, was substantially known to a certain man who came here from Utica, and who after practising it with success some years ago, on a few houses in town, all at once, for some unaccountable reasons, gave it up and left the city. If it could be brought into general use among us, what a domestic blessing it would be?

From a late London Paper.

Improvements in the construction of Chimnies.

Perhaps in the construction of a house, there is no part more difficult or liable to so many objections as the formation of the chimnies, nor is there any part in which impediments to comfort so frequently arise. There are few who have not experienced the inconvenience of smoky chimnies and who have not been put to serious expense—often ineffectually—to remedy the evil. We are glad, however, to find that a scientific man has turned his attention to the subject, and that after various experiments, he has at length succeeded in suggesting a plan by which all the imperfections hitherto known to exist may be completely obviated. This plan has been submitted to the judgment of some of the best practical architects of the day, and has received their unqualified approbation; and it is now applied not only to all the chimnies erecting in the new palace in St. James' Park, but to the Post Office, and all other public buildings in progress. The public are indebted to Mr. Hior, the Chief Examiner in his Majesty's Office of Works, for this useful invention; and this gentleman has devoted much of his time, by evening lectures, to explain to builders the advantage and simplicity of his plan, which consists in the substitution of flues or tunnels of any diameter, capable of being incorporated within the usual thickness of walls, instead of the old plan of square flues. Each flue is surrounded in every direction, from top to bottom, by cavities commencing at the back of every fire place, and connected with each other. The air confined within these cavities is, by the heat of any one fire, rendered sufficiently warm to prevent condensation within all the flues contained in the same stack of chimnies; and what renders the new invention more important is the fact that the flues may be carried in any direction with as much facility as a leathern pipe, without, in the slightest degree, deviating from the original circular form. It would be difficult, by mere verbal description, to convey an adequate idea of the whole of the plan; but it is capable of being made clear to the commonest capacity by a few minutes instruction. The work is accomplished by the aid of bricks of a peculiar shape, for which a patent has been obtained; and by the mode of placing those bricks which are numbered according to a model with which the workman is provided, a perpendicular, horizontal, or curved shape is attained with the greatest facility, the circular form of the flue being still preserved with mathematical nicety, without the necessity of cutting a single brick, and the expense will not exceed more than four shillings a foot than is expended in the common mode for every flue erected. The advantages which are secured by this plan are—first, the

certainly of a quick and uninterrupted draft; secondly, the prevention of an accumulation of soot; thirdly, the impossibility of accident from fire; and fourthly and above all, a facility of cleansing by machines, which will altogether supersede the painful necessity of employing climbing boys. Another advantage is also gained with respect to the appearance of the chimnies on tops of houses. The present unseemly shafts, which are frequently raised to a dangerous height, may be dispensed with and the tops or terminations of the chimnies completely hidden from view. We have seen a model and drawing of the plans, which, at once exhibit the simplicity of the invention; and the only surprise is, that so valuable an improvement in the art of building should so long have escaped the research of those who have experienced its necessity. At present, the demand for the patent bricks exceeds the power of the patentee to supply; but arrangements are making which it is hoped will enable builders to bring the plan into universal adoption. It may be proper to add, that the principle is capable of being applied to the tops and bottoms of old flues with great advantage.

IRON CASTINGS.—INQUIRY.

[TO THE EDITOR OF THE AMERICAN FARMER.]

Sir.—Some years since a gentleman in this neighbourhood purchased a set of Iron Castings for a Grist Mill to go by animal power, say "a large wheel of the spur kind, 24 feet diameter (in sections) with the necessary smaller wheels," &c. As I find the wheels would answer a valuable purpose in our section of country, I have some time wished to purchase a set of them, but as I do not know where the person who sold those I have spoken of is residing at present, I am entirely at a loss where to procure them, and all my inquiries on the subject have as yet proved fruitless. I am therefore induced to take this method of inquiring among your numerous readers, where or at what foundry in the eastern or middle states can castings of the above description be procured?

An answer to the above would oblige and serve the writer and several of his neighbours. L.
Wrightsville, Duplin Co. N. C.

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

A WHISPER TO THE WIFE.

[Continued from p. 37.]

Chapter VII.

ON CONDUCT TOWARDS RELATIONS ACQUIRED BY MARRIAGE.

You have now, gentle lady, got among a new set of relatives—your relations-in-law; and a fresh field of duty is opened to you. There is an old observation, that her mother and her daughters-in-law are natural enemies; and, in truth, I must say there is too much reason for the remark. But in this disunion, there are generally, indeed almost always faults on both sides. And why is this?—why need any fault proceed from you? Why not imitate a character so beautifully drawn from Scripture—the warm-hearted and interesting Ruth? She loved her departed husband, and because she loved him his mother was dear to her. Friends, country, kindred, all were given up for the mother of him she loved. What a sweet picture of tenderness and sensibility! I confess I never read the story, without feeling strongly impressed and interested by it; and, in imagination, I see the beautiful Moabitess saying to her mother-in-law, "Nought but death shall part thee and me." If you love your husband, gentle lady, surely you must love the authors of his being, surely you must love the sisters of his youth!

And besides all this, listen for a moment to nature and reason. Your relations-in-law have lost their son and their brother: in truth, gentle lady, they have *lost* him; for when once a man is married, though he may repel the charge with warmth, and even with sincerity, adieu to the home and scenes of his youth! adieu to the father who gave him life!—to the mother who nursed him in her bosom!—to the sisters who loved him in the fondest corner of their hearts! New objects, new connexions, new pursuits, have rivalled and “rent those ancient loves asunder;” and his wife, and very frequently her relatives, now step in, and draw away his love and his attention from all that had hitherto engrossed him. Is it any wonder, then, that relations-in-law should look with a degree of jealousy on the woman who has thus alienated those affections and attentions, which for so many years they were in the exclusive possession of?—A wife perhaps will cry out and say, “Am I to blame for all this?—am I in any degree in fault? Pity, indeed, my husband did not keep himself single to dangle after his mother and sisters! Pray, is not a man to leave father and mother, and cleave to his *wife*?” Hush, gentle lady, hush! Bear with me for a moment. I mean not to contradict you; I mean not to blame you; nay, I do not even mean to say your husband should have done any thing but exactly what he did do; viz. *marry you*. All I ask is, an effort to make yourself an exception to the coldness, the satire, the ill-nature, which too generally characterizes a daughter-in-law or sister-in-law. All I ask is, (and I am sure a compliance is not difficult,) that you will, by kindness and affection, give your husband’s family reason to rejoice in the day that he first introduced you amongst them.

And pray, gentle lady, let your manners to your sisters-in-law be particularly kind and considerate. You are made a happy wife at their expense, at their loss—the loss of a beloved brother. Enter into their feelings, endeavour to gain their confidence; your matronly experience qualifies you to be their adviser as well as friend. Do all you can to make them appear to advantage, and to forward their advancement through life. As a married woman, *much* lies in your power. Should there be a favourite swain, approved of by father, mother, and prudence on all sides, remember your own feelings on a similar occasion, and take every opportunity to promote the union. Married women are sometimes extremely apt to forget girlish pursuits, hopes, and wishes, and to speak satirically of the very manner which perhaps before marriage they had themselves been remarkable for. Avoid such inconsistency, and give your sisters-in-law reason to say, “No: we have not lost our brother;—far from it; we have gained a sweet sister and friend!”

Chapter VIII.

ON THE TREATMENT OF SERVANTS.

“Next to your children,” says an admired writer, “your servants are your nearest dependants: and to promote their good, spiritually as well as temporally, is your indispensable duty. Let them always join your family devotions, and endeavour to make them spend their Sabbath properly.”

I have heard an old domestic remark, the worst a mistress a servant ever lived with were young married women. “They are unreasonable,” said he, “in their commands: they expect too much; nor do they know rightly when to commend or when to blame.”

In your manner to your servants, be firm without being severe, and kind without being familiar. Never be in the habit of conversing with them, unless on business, or on some point connected with their improvement. But, with this reserve and distance of manner, be particularly careful to maintain kindness, gentleness, and respect for their feelings.—
Options, after unnecessarily examined, and

their temper wantonly irritated. “I have been sometimes shocked,” says Mrs. Chapone, “with the want of politeness by which masters and mistresses provoke impertinence from their servants.” I remember seeing a lady, who filled every station of life with honour both to her head and her heart, attending the dying bed of an old domestic who had lived for thirty years in her service.—“How do you find yourself to-day, Mary?” said her mistress, taking hold of the withered hand which was held out. “Is that you, my darling mistress?” and a beam of joy overspread the old woman’s face. “O yes!” she added, looking up, “it is you, my kind, my *mannerly* mistress!” The poor old creature said no more; but in my mind she had, by this last simple word, expressed volumes of panegyric on her amiable mistress.

Let your commands to your servants be consistent and reasonable; and then firmly, but mildly, insist on obedience to them. I really think that common complaint: “My servants never remember what I tell them to do,” might, in a great degree, be obviated. Let them see that you are particular, and that you will not pass over any neglect of orders; and when they find that this decisive manner is accompanied by mildness, kindness, and consideration, and that you are not to be disobliged with impunity, they will soon take care to remember what you command them to do. A little effort very easily remedies a bad memory.

“Never keep a servant, however excellent they may be in their station, whom you know to be guilty of immorality.”

When a servant is sick, be particularly kind and considerate to them. The poor *dependant* creature has nowhere else to go, no one else to turn to: and their pale looks should be always a claim on your sympathy.

It is very disheartening to a poor servant, to be continually found fault with. Praise and reward them when you can; human nature will not bear constant chiding.

(To be continued under the head of Management and Education of Children, &c.)

ON LOVE AND MARRIAGE,

By the author of *Waverley*.

EXTRACT.

It were judging hardly of him to suppose that the mere belief that he had attracted her affections more easily than he expected, was the cause of his ungratefully undervaluing a prize too lightly won, or that his transient passion played around his heart with the flitting radiance of a wintry sunbeam flashing against an icicle, which may brighten it for a moment, but cannot melt it. Neither of these was precisely the case; though such fickleness of disposition might also have some influence in the change.

The truth is, perhaps, that the lover’s pleasure; like that of the hunter, is in the chase; and that the brightest beauty loses half its merit, as the fairest flower its perfume, when the willing hand can reach it too easily. There must be doubt—there must be danger—there must be difficulty—and if, as the poet says, the course of ardent affection never does run smooth, it is perhaps, because, without some intervening obstacle, that which is called the romantic passion of love, in its high poetical character and colouring, can hardly have an existence, any more than there can be a current in a river, without the stream being narrowed by deep banks, or checked by opposing rocks.

Let not those, however, who enter into an union for life without those embarrassments which delight a Darsie Latimer, or a Lydia Languish, and which are perhaps necessary to excite an enthusiastic passion in breasts more firm than theirs, augur worse of their future happiness—because their own alliance is

intimate knowledge of each others character, seen, as in their case, undisguised by the mist of too partial passion—a suitable proportion of parties in rank and fortune, in taste and pursuits—are more frequently found in a marriage of reason, than in an union of romantic attachment, where the imagination, which probably created the virtues and accomplishments, with which it invested the beloved object, is frequently afterwards employed in magnifying the mortifying consequences of its own delusion, and exasperating all the strings of disappointment. Those who follow the banners of reason are like the well disciplined battalion, which, wearing a more sober uniform, and making a less dazzling show than the light troops commanded by imagination, enjoy more safety, and even more honour, in the conflicts of human life.

SPORTING OLIO.



FISHING.

FROM RURAL SPORTS—BY GAY.

As in successive course the seasons roll,
So circling pleasures recreate the soul.
When genial Spring a living warmth bestows,
And o’er the year her verdant mantle throws,
No swelling inundation hides the grounds,
But crystal currents glide within their bounds;
The finny brood their wonted haunts forsake,
Float in the sun, and skim along the lake;
With frequent leap they range the shallow streams,
Their silver coats reflect the dazzling beams.
Now let the fisherman his toils prepare,
And arm himself with every watery snare;
His hooks, his lines, peruse with careful eye,
Increase his tackle, and his rod re-tye.

When floating clouds their spongy fleeces drain,
Troubling the streams with swift-descending rain;
And waters tumbling down the mountain’s side,
Bear the loose soil into the swelling tide;
Then soon as vernal gales begin to rise,
And drive the liquid burthen through the skies,
The fisher to the neighbouring current speeds,
Whose rapid surface purls unknown to weeds:
Upon a rising border of the brook
He sits him down, and ties the treacherous hook;
Now expectation cheers his eager thought,
His bosom glows with treasures yet uncaught;
Before his eyes a banquet seems to stand,
Where every guest applauds his skilful hand.

Far up the stream the twisted hair he throws,
Which down the murmuring current gently flows;
When, if or chance or hunger’s powerful way
Directs the roving trout this fatal way—
He greedily sucks in the twining bait
And tugs and nibbles the fallacious bait.
Now, happy fisherman, now twitch the line
How thy rod bends! behold, the prize is thine.
Cast on the bank, he dies with gasping pain,
And trickling blood his silver mail distains.

You must not every worm promiscuously use.
Judgment will tell the proper bait to choose.
The worm that draws a long immoderate size
The trout abhors, and the rank morsel flies:
And, if too small, the naked fraud’s in sight
And fear forbids, while hunger does invite.
These baits will bait away his fisher’s gain—

Whose polish'd tails a shining yellow stains:
Cleanse them from filth, to give a tempting gloss,
Cherish the sulli'd reptile race with moss;
Amid the verdant bed they twine, they toil,
And from their bodies wipe their native soil.

But when the Sun displays his glorious beams,
And shallow rivers flow with silver streams,
Then the deceit the scaly breed survey,
Bask in the sun, and look into the day:
You now a more delusive art must try,
And tempt their hunger with the curious fly.

To frame the little animal, provide
All the gay hues that wait on female pride;
Let Nature guide thee! sometimes golden wire
The shining bellies of the fly require;
The peacock's plumes thy tackle must not fail,
Nor the dear purchase of the sable's tail.
Each gaudy bird some slender tribute brings,
And lends the growing insect proper wings:
Silks of all colours must their aid impart,
And every fur promote the fisher's art.
So the gay lady, with excessive care,
Borrows the pride of land, of sea and air:
Furs, pearls, and plumes, the glittering thing displays,

Dazzles our eyes, and easy hearts betrays.

When a brisk gale against the current blows,
And all the watery plain in wrinkles flows,
Then let the fisherman his art repeat,
Where bubbling eddies favour the deceit,
If an enormous salmon chance to spy
The wanton errors of the floating fly,
He lifts his silver gills above the flood,
And greedily sucks in th' unfaithful food;
Then downward plunges with the fraudulent prey,
And bears with joy the little spoil away:
Soon in smart pain he feels the dire mistake,
Lashes the wave, and beats the foamy lake;
With sudden rage he now aloft appears,
And in his eye convulsive anguish bears;
And now again, impatient of the wound,
He rolls and wreathes his shining body round;
Then headlong shoots beneath the dashing tide,
The trembling fins the boiling wave divide.
Now hope exalts the fisher's beating heart,
Now he turns pale, and fears his dubious art;
He views the tumbling fish with longing eyes,
While the line stretches with th' unwieldy prize;
Each motion humours with his steady hands,
And one slight hair the mighty bulk commands;
Till, tir'd at last, despoil'd of all his strength,
The game athwart the stream unfolds his length.
He now, with pleasure, views the gasping prize
Gnash his sharp teeth, and roll his blood-shot eyes;
Then draws him to the shore, with artful care,
And lifts his nostrils in the sickening air:
Upon the burthen'd stream he floating lies,
Stretches his quivering fins, and gasping dies.

MANAGEMENT OF COLTS INTENDED FOR THE TURF.
Extract from *W. R. Johnson, Esq., to the Editor of the American Farmer.*

"I keep my colts tolerably fat, though not overloaded with flesh—turn them out in good weather, and keep them up in bad—taking care not to let the horse colts smell or see other horses more than can be well avoided."

MISCELLANEOUS.

DIRECTIONS FOR THE USE OF ANTHRACITE.

[From the New York American.]

CHAPTER I.—Of Buying and Breaking.

1. Buy from the vessel, if possible; for a chaldron there is more than at the yard.
2. Stand by and see that large pieces only are put into the cart, for a cart of very large pieces,

when broken up, makes a cart and a quarter of small ones.

3. Refuse a load that appears to contain dust, because Lehigh dust is clear waste, and enough in all conscience is made in the breaking.

4. Break the COAL before housing it, unless you would have to break it yourself at the risk of either eye.

5. Do not take a man from the yard with his patent hammer, to break your COAL for you, unless you would pay twice what the job is worth, and what a dozen, in less than five minutes after the COAL is dumped, will offer to do it for.

6. In breaking, see that each piece is broken by itself on the pavement, and not as is usual, on the mass, unless you wish to burn half the COAL as powder.

7. Let the pieces into which it is broken be about the size of a half pint tumbler.

8. Watch the fellow who breaks, or he will not break half small enough—or, he will break it on the mass—or he will take care to wet it all in the gutter before he takes it up.

CHAPTER II.—Of the Kindling.

1. This is a great mystery, therefore proceed with caution and with a mind divested of all prejudice.

2. Let the grate be perfectly cleared of all foreign substances, and begin the fire at the bottom.

3. The best material for kindling is dry hickory. The cheapest method is this; buy a load of dry hickory, stipulate that it shall be large, have it sawed three times—the wood now will be in chunks, split it up as fast as wanted, and no faster.

4. Having got the kindling proceed to the grate. Throw into it first live coals from the kitchen, then lay on the hickory, be not too sparing, then place loosely, and with the fingers, fair pieces of Schuylkill, Lehigh, or Rhode Island of the orthodox size. I advise the use of the fingers, because the work is done quicker than with the tongs, from which the Schuylkill perpetually slips. Let the COAL be piled as high as the grate will allow.

5. If the process of kindling fails, begin all over again. Failure most frequently proceeds from stinginess in the material of kindling. Better be prodigal of it than have the fire go out, and the grate all disembowelled a second time. Horresco referens. (I shudder while I mention it.)

6. The fire being now well under way, it will need to be fed but three times during the day and evening. The first replenishing should take place immediately after breakfast, when the family break up—the gentlemen retreating to the counting room, office, or study, and the ladies to their dressing rooms; the second, about an hour before dinner; the third, a little in the evening.

7. If my readers are willing to be truly economical, let them replenish a fourth time. viz. at going to bed—which I call the *perpetuating process*. Since, if it be done properly, the fire need be kindled but once during the whole winter, say on the 1st day of November, and thus an immense amount of kindling matter be saved.

8. The method of perpetuating is exceedingly simple, and consists merely in adding a few pieces of COAL, at 11 o'clock say, and then covering the whole with cinders and ashes, usque satietatem, i. e. till you have shovelled up as much as the grate can bear. In the morning all you have to do is to clap on the blower, and presto, the fire is before you, red hot. Following this plan, my parlour has always been comfortable at breakfast.

9. Let not the ladies murmur: the grate can still be cleaned. When the servant first approaches the grate in the morning, every thing is calm, quiet, slumbering, and cool—you would hardly believe the fire to be there: and the brass can therefore be polished without the least hindrance.—And not till that is done should the blower be applied.

CHAPTER III.—Of the Poker.

1. A judicious use of the poker is essential to the well being of an anthracite fire. This is the most delicate part of the science of COAL burning, and the strictest attention should be given to it. So nice a matter is this, that I am almost ready to say, that I can form my opinion of a man's intellect from his application of the poker, as well as from his pleading, preaching or physicking.

2. An ignorant, a meddlesome, or nervous person, you will often see thrusting in the poker at all adventures, without rhyme or reason—as often marring as making the fire. In a cold winter day, particularly, the poker should always be kept out of his reach.

3. The legitimate office of the poker, in the case of a hard coal fire, is to clear away the ashes which accumulate on the lower bars, and promote a free circulation of air. Not to quicken the blaze by breaking a large coal in pieces, or by changing the position of pieces, as in fires of Liverpool.

4. A fire should be poked when at its zenith; if you wait till it is much below that, your poking will only poke it out; the more you poke the less it will burn.

5. If the fire from having been too long neglected, appear to be in a doubtful state, hesitating between life and death—*never touch a poker to it*; it will be the death of it; never stir it; scarce look or breathe upon it—but with the step of a ghost, clap on the blower, and if the vital spark be not wholly extinct, the air will find it out and in a few moments blow it up to a generous heat; then gradually add fresh coal in small clean pieces, devoid of dust, and your fire is safe. Servants never learn this mystery; they always fly to the poker in every case of distress, and by their stupid use of it, double their own labour and vex the mistress of the house.

6. This direction should be particularly observed in the morning, when a fire has been *perpetuated*. No coal should be added nor the fire touched, till after the blower has been up and done its work. It will often be found, especially in the case of the Schuylkill coal, (far preferable to Lehigh,)—that this alone will furnish a sufficient heat for the breakfast hour; which is a demonstration that it is no waste, but a clear saving, to perpetuate the fire in the manner laid down.

7. Many more niceties might be enumerated touching the poker; but I refrain, and willingly leave something to the imagination of the reader. I would conclude, as the preachers say, with only one practical remark—that you will never have a good anthracite fire, till you have broken your husband, brother or wife, of the mischievous habit of poking. It is surely an unseemly habit in itself, as well as an injurious one to the fire. It shows, too, a meddlesome, prying, insinuating disposition; and I can never help thinking, when I see one of this sort poking the coals, that he only wants the opportunity to thrust himself into my private affairs.

CHAPTER IV.—Containing Miscellanies.

1. If the Saving Bank is a good thing in Wall-street, it is a better thing in our houses. If we save at home, we need not put our money there; we shall be rich enough without money at interest. We waste in nothing more than in the use of hard coal. The cinders which I see every day lying in the streets, nay before my own door, would, if gathered up, afford fuel to many a poor family; yet I confess that I cannot perceive how the evil is to be remedied. The cinders get so mingled with the ashes, that it is difficult to separate them, and servants will not do it. But till a way is discovered of saving them, a Schuylkill may be a clean and hot fire, but it will not be a cheap one. Of Liverpool coal you can burn every atom.

2. The blower should, questionless, be the size of the whole grate. But it should be used with discretion.

3. As to the forms of grates, I think on the whole that the Lehigh grate with horizontal front bars, and rake ones for the bottom, possesses the greatest advantages. There is the greatest objection to one of the common Liverpool construction, which is, that the floor of it, the bottom bars, are altogether too thickly set. The ashes cannot fall through, but collect upon them, deaden and finally extinguish the fire, while the coal is not half consumed. In order to keep the fire agoing at all, there must be a very frequent clearing away of the ashes with the poker. A practice to be deprecated, as it tends to generate the worst habits.

AN AMATEUR.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 28, 1826.

MARYLAND AGRICULTURAL SOCIETY.

Thursday, April 20th, 1826.

A meeting of the Trustees was this day held at Hayfield, Colonel Bosley's—present, G. Howard, chairman pro tem.; Col. Bosley, James Carroll, Jr., Dr. A. Thomas, J. B. Morris, J. Gittings; James Cox, treasurer; J. S. Skinner, corresp'dg secretary. The Board proceeded to the appointment of Judges to award the premiums at the next Cattle Show, viz:

For Crops.

Dr. Stockett,	Samuel Stone,
C. W. Dorsey,	Charles Sewall,
L. Dennis,	E. F. Chambers,
J. R. Dall,	Francis Hall.
John Contee,	

Horses and Mares.

Samuel Hollingsworth,	John Edmonson,
Robert Lyon,	C. S. Ridgely,
Edward Hambleton,	Henry Hall, An. Ar. co.

Asses and Mules.

H. M. Steel,	John O'Donnell,
G. Beltzhoover,	John Hunter,
Wm. H. Fitzhugh,	T. Snowden, Jr.

Neat Cattle.

Nicholas Goldsborough	Christopher Carnan,
Samuel Owings,	William Gibson,
Frisby Tilghman,	Dr. John Dare,
John B. Willis,	James Hood.

Swine.

T. B. Dorsey,	Samuel W. Smith,
John McGaw,	John Beckett,
Samuel Brown,	N. Martin.
John Stone,	

Sheep and Wool.

Edward Lloyd,	Robert W. Bowie,
John Mercer,	J. Sykes, Jr.
Colonel Emory,	S. Hollingsworth, Jr.

Domestic Manufactures.

General J. Mason,	John Ferguson,
Daniel Murray,	county,
Edward Gray,	Samuel Stearns,
George Hoffman,	at Spoons
John C. Wilson, Jr.	

Implements.

Tench Tilghman,	Janie
Philemon Chew,	Janie
Virgil Maxcy,	Tham
Richard Crabb,	

Furniture.

Joseph Galois,	genera
Wm. Lornian,	erman stump
John G. Proud,	all of
John C. Longay,	

John C. Longay,	Wm. L. 35
Roger Brooke,	Wynn Harre
Thomas Snow,	general Co.
J. W. Mackel,	

Ploughing.
Daniel Jenifer, Caleb Dorsey, Jr.
Allen Dorsey, N. Thomas,
Col. Maynadier, John Marsh,
Thomas Hood, B. Bracker.

Experiments.
Dr. Muse, John Lee,
Com. Jacob Jones, Levin Gale,
H. G. S. Key, James Chamberlain,
G. C. Washington, Dr. Duvall.

The premiums heretofore offered for Cows were altered so as to bestow—

A premium of \$15 for the best Cow, } particulars
Do. 10 " 2d best do. } as
Do. 5 " 3d best do. } published.
And for best Heifer, \$10.
2d best do. 5.

It was unanimously resolved, That the volunteer premium so liberally and handsomely placed at the disposal of the Trustees by Mr. JOSE SYLVESTER REBELLO, Minister from Brazil, to consist of a silver cup valued at \$20, be presented to the owner of the Ram, which, being shorn upon the ground, shall yield the greatest weight of picklock* wool, the condition of the fleece as to cleanliness being taken into consideration.†

JAMES HOWARD, Secretary.

* That is, the finest wool.

† Gentlemen who may be disposed to contend for this premium, are requested to give notice to the Editor of the American Farmer as early as convenient; and it has been suggested that the competitors should make up a sum sufficient to provide a match for the volunteer premium, to be taken by the victor.

GARRICK.

An imported full bred Devon Bull, will stand this spring at the first Toll Gate, on the Baltimore and Harford Turnpike road, two miles from the city, and be let to Cows at five dollars each, the money, in every instance, to be sent with the Cows, and for which a warranty is given.

Garrick was purchased from the celebrated stock of Mr. Childes, near Bewdley, Worcestershire, who has for several years been the most extensive and successful breeder of North Devon cattle in England, and Garrick was acknowledged to be his best yearling at the public sale in September, 1824. He was by Prize out of Fill Pail, as per catalogue and pedigree, which accompanied him.

Garrick took the highest prize at Easton Cattle Show last fall; he is now in fine order, and pronounced by all who have seen him, to be a very superior animal, and the heaviest of his age in this country, being only two and an half years old, and actually weighs 1484 pounds.

JOHN BROWN, Gate Keeper.

N. B. Applications having been made from different parts of the country for the services of Garrick, and his stock being now well established, he will be offered for sale (if not previously engaged,) at the approaching Cattle Show in June next—at which time some young full bred Devons, (warranted pure blood,) may also be obtained. If further particulars are required, apply as above, per mail, post paid.

April 28, 1826.

[§] For fineness of bone, compactness of form, and more especially for rich yellowness of skin, which is one of the strongest signs of superiority in this race of animals, Mr. Thompson's Bull is highly distinguished. [ED. AM. FARM.]

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bb.	8			
BACON, and Hams, . .	lb.	5	8 9	12	
BEEF-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java,	—	17	18	22	25
Havana,	—	18		18	20
COTTON, Louisiana, &c.	—	14	15		
Georgia Upland, . .	—	11	12 1/2		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12		14	16
Dipt,	—	10		12 1/2	
CHEESE,	—	8	10	12	15
FEATHERS, Live, . .	—	31	32	37	
FISH, Herrings, Sus.	bb.	2 50			
Shad, trimmed, . .	—	6 50		8	
FLAXSEED, Rough, . .	bush	75		87 1/2	
FLOUR, Superfine, city,	bb.	4 00	4 25	5 00	6 00
Fine,	—	4			
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	68	70		
Wheat, Family Flour,	—	80	85		
do. Lawler,	—	65	70		
do. Red,	—	80	83		
Rye,	—	65	70		
Barley,	—	80			
Clover Seed, Red . .	bush	3 8 1/2	4 25	4 75	
Ruta Baga Seed, . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	2 25		3 00	
Oats,	—	40	42	45	50
Beans, White, . . .	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	24		37	
HOGS' LARD,	—	7	8 1/2		
LEAD, Pig	lb.	6 1/2	7		
Bar,	—	7 1/2			
LEATHER, Soal, best,	—	24	25	62	
MOLASSES, sugar-house	gal.	45		62 1/2	75
Havana, 1st qual. . .	—	28	28 1/2	37 1/2	
NAILS, 6x20d. . . .	lb.	61		9	
NAVAL STORES, Tar, .	bb.	1 25			
Pitch,	—	2 25			
Turpentine, Soft, . .	—	1 50			
OIL, Whale, common, .	gal.	30	31	40	
Spermaceti, winter .	—	68	70	88	
PORK, Baltimore Mess,	bb.	11 00	12 00		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	4 75			
ground,	bb.	1 50			
RICE, fresh,	lb.	3	3 1/2	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5 1/2	7 1/2	8	12
WHISKEY, 1st proof, .	gal.	28	29	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	36	37	50	
SUGARS, Havana White,	c. lb.	13 50	15	16	
do. Brown,	—	9 00	9 50		
Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	24
SPICES, Cloves, . . .	—	70	75	1 00	
Ginger, Ground, . .	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes, . . .	bush	43	45	75	
Liverpool Blown . .	—	45	46		
SHOT, Balt. all sizes, .	cwt.	9 00		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 20		2 00	
Lisbon,	—	1 15		1 50	1 75
Claret,	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 65	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40		
do. crossed,	—	25	30		
Common, Country, . .	—	20	30		
Skinnners' or Pulled, .	—	25	30		

Printed every Friday, at \$5 per annum, for JOHN A. MINNER, Editor, by JOHN D. TOR, corner of St. Paul and Market streets, where every description of Printing is executed.

AGRICULTURE.

ON THE MANUFACTURE OF BUTTER AND CHEESE.

By S. De Witt, Esq., of Albany.

(From the 3d [last and best] vol. of the Memoirs of the Board of Agriculture of the State of New York.)

[EXTRACT.]

(Concluded from p. 42.)

The art of making good butter is well known, but people generally will not practice it; and for such it is useless to publish any improvements. In order to be wise, it is necessary to know both good and evil. It will, therefore, not be amiss to say something about the art of making bad butter. Although this is generally known, and almost universally practised, still I know some who are yet unacquainted with it; and it is to put them on their guard, as well as to reform others, that I make this communication.

In the first place, then, after your churn and other vessels, have been used in making butter, be sure not to scald them, for hot water will deprive them of the oily substance that will adhere to them, and soon acquire a strong, rancid flavour and taste, which will impregnate every succeeding batch, in the same manner that leaven does in the making of bread. Secondly, keep collecting your cream into one vessel, day after day, until it has made some progress in putrefaction, then churn it, and the business is done. You may work it, and season it, as you please, afterwards, but its constitution is unalterable. The principal quality of which will be a tendency soon to become unfit for any use whatever, in any article of food. When butter is thus made, it will be often beautified with a variety of colours, and possess a rapidly increasing rancidity, which may be agreeable enough to those who have been brought up with it from their infancy, but insufferable to others. And the buttermilk, thus made, is very properly condemned as fit only for hogs. No wonder, then, that buttermilk is abhorred in those parts of our country where such is the method of making it, and no other is known.

In the counties of Ulster and Orange, celebrated for the excellence of their butter, in the New York market, the utmost attention is paid to cleanliness. Their strainers, churns, creaming vessels, bowls and ladles are, as often as they are used, washed, scalded and scrubbed,* and the milk rooms, which are commonly dry, airy cellars, without wooden floors, are kept free from every thing in the least offensive. The milk is carefully strained, and as soon as the cream is completely formed, it, together with the cream, is emptied into the churn, when the churning is immediately commenced, and continued, with short intervals, till the butter is come. The butter is then taken off with a ladle made for the purpose, and kept exclusively for the service, and put into a large wooden bowl, where, with the same ladle, the whey, or rather buttermilk, is thoroughly worked out of it. No hand or finger is ever suffered to come in contact with it. Where dairies are any way considerable, churning is a daily operation, and done early in the morning, especially in summer.

There is a period when cream will be completely formed, and be in its highest perfection; after which it will deteriorate, and should not be suffered to remain unchurned. Inattention to this is one of the principal causes of the bad quality of butter.

In this manner, is not only the best butter, but

* The scrubbing is done with a small broom, made of a black ash or hickory sapling, after the Indian manner; the body of it is two and a half or three inches thick, and about four inches long; the handle five or six. It is called a *bender*.

also the best buttermilk, obtained; which, besides affording an excellent beverage, makes, with the addition of a little sugar or molasses, and rusk or good bread broken in it, a dish to crown the farmer's dinner, more refreshing and more exquisitely relished than the strawberry-flavoured ice creams of the luxurious rich.

There are yet a few, and it is sadly to be lamented, yet but a few, farmers left in the country surrounding Albany, who manage their dairies in this manner: but their butter is mostly all pre-engaged, at twenty-five cents per pound, by their old-time acquaintances, who cannot help recoiling at the sight and smell of what is generally brought to our market, and with difficulty sold for eighteen cents. This fact, it is true, is not very creditable to our country; but it is, notwithstanding a fact. Every citizen knows that it is extremely difficult, in Albany, for a family to get a supply of eatable butter. But where the object is to cure an evil, it is necessary that it should be pointed out and correctly described, whatever effect such a procedure may have on the feelings, reputation or interest of those whom it may immediately concern. Such things affect the general interest as well as the character of our country, and therefore it is proper that they should be faithfully exposed, and duly attended to.

The making of butter, one would suppose, were well understood in the vicinity of Boston; and yet there is no market in any of the large capital cities in the United States, so noted for the bad quality of its lump-butter, as this very town of Boston. Philadelphia has long been celebrated for the uniform excellence of its butter, and its clean and wholesome appearance in the market. In New York, many individuals with laudable liberality, recently awarded premiums for the best butter brought into that city for sale; which, it is said, has produced an obviously good effect in the general quality of the article.

It deserves consideration, whether our Agricultural Society, alive as they are to every thing which will benefit our reputation, and whilst they are granting premiums for raising best cattle for dairies, should not also bestow some attention on the manufacture of butter and cheese.

It is useless to possess good cows and good milk, if the butter which is brought to market, is only a disgrace to the farmers. We hope the Massachusetts Agricultural Society may be induced to offer a premium for the best butter which may be brought to market, by any individual dairy during the summer months.

Mode of making butter, as it is practiced in the neighbourhood of Rennis, in Brittany, where the best butter in France is made—milk is composed of three parts, essentially different from each other; they are as follows:

1st. The aqueous part, called whey, which is very acid.

2d. The cheese part, which is substantial.

3d. The butter part called cream, of an oily nature, and which comes up naturally to the surface of the milk, even before its decomposition.

It is this cream that is turned out into butter by churning.

In order to make good butter, the decomposition of milk must have begun; I mean its three parts must be exactly separated, as it happens when it begins to turn sour. Milk must necessarily be sour before beginning to churn; but it is urgent to churn it as soon as it is sour; and not to wait its fermentation.

It must have curdled and soured of itself without fire. In the winter season, however, it is proper to pour a little sour milk into it, to make it coagulate.

Though the cream is the elementary part of butter, and neither the whey nor the cheese part contain any of it, yet it is necessary to throw into the churn the three parts of the milk, and to churn

them altogether. The reason of it is evident. The churning, which must be always uniform and continual, communicates a slight degree of heat, which would give a disagreeable taste to the butter, if the cream were churned alone; while churning the whole together, the acidity of the whey tempers the heating effects of the churning, the cheese part helps the separation, and the butter comes fresh out of the churn.

It is to preserve the fresh taste, that in summer our butter women, as soon as they see the small globules of butter beginning to form, do not fail to throw into the churn (by the hole of the churn-staff, and without stopping the churning,) some pints of spring water every ten minutes; that is, a pint to every fifty or sixty pints of milk. In winter, on the contrary, they add warm water; but they pour it in as soon as they begin to churn, in order to accelerate the slight degree of heat necessary for the formation of butter; but when they perceive the first butter globules forming round the churn-staff, then they cease pouring warm water, and the temperature warns them putting any more cool water. Thus, to make butter it is required—

1st. That milk must have curdled and soured, but not fermented.

2d. That milk must have naturally soured, without any help but a little quantity of sour milk, and especially without warming it.

3d. That all milk should be put into the churn together, and churned without extracting any parts of it.

4th. That the churning should be continual and always uniform, avoiding to strike the bottom of the churn.

5th. That churning, without interruption, communicates to the milk a slight degree of heat, which is necessary, and which in winter may be accelerated, by adding some warm water from the moment one begins to churn, and without stopping the churning motion.

6th. As soon as one perceives the little globules of butter forming, one must then think only to cool, with spring water, if in summer, for in winter it is not necessary.

7th. If, when one wishes to churn, one has some sweet milk not yet sour, but which one wishes to churn, it must be put into the churn with the curdled milk twelve or fifteen hours, more or less, according to the relative quantity, before beginning to churn, in order that the part of sweet milk you have added be entirely curdled.

8th. This mode is, no doubt, much longer than when the cream alone is churned; for one must churn during about two hours in the most favourable season, and it is common in winter to take four hours churning to have your butter made.

Preparation for Butter.

When the butter is made, if the weather is hot, it is well, after having gathered it in the churn, to let it cool about two hours; but when it is very hot weather, as that time is not sufficient to cool it, it is well to put it in a very cool place during some hours, till it is very firm, in order to extract the buttermilk out of it.

It is by kneading and turning repeatedly with a wooden box spoon, and a beach dish made of one piece, that the women about Rennis extract the buttermilk; leaving it now and then to rest and grow hard, and then beginning again, till it does not yield any buttermilk; it is only in the last extremity, and in the hot days of summer, that they knead it in cool water in order to extract the buttermilk out of it: they put nothing in it, but some salt for preserving and relishing it.

They never touch the butter but with the wooden box spoon, which must be impregnated, and also the dish, with some light brine, to prevent the butter from adhering.

All the utensils employed for milk must be carefully washed with boiling water every time they have been made use of, then washed again with cool water and exposed to the sun, that they do not get a musty smell. It is necessary to remove from the dairy all the disagreeable or strong smells, and to observe the most scrupulous cleanliness in it, but without humidity, which would give a mouldy taste to milk.

The churn is made of chestnut wood; it is scalded every time it is emptied to churn again; it is rubbed with a bunch of hollyoak, that scratches and cleans it well, and then washed again with cold water.

The pots and churn must keep no smell of the sour milk, and none of the utensils employed should be, or have been put to any other uses, for fear of spoiling the whole.

ON THE CHANGING OF SEED.

Change of Seed not necessary to prevent degeneracy; Naturalization of Plants; important caution to secure permanent good quality of Plants. By Joseph Cooper, of Gloucester county, New Jersey.

(From Memoirs of Pennsylvania Agric. Society.)

The following paper on several important agricultural subjects, has already been published in the United States, and in Europe, and has deservedly excited very general attention. The writer is entitled to every degree of respect, both for his practical knowledge, and integrity of relation. His experience and opinions differ widely from those generally received. The results produced, require the care and attention which few will give. The merit of Mr. Cooper is therefore the greater. That both sides of a question, in which agriculturists are highly interested, might fairly appear, the society have thought it right to add to their memoirs, this development of the practice and success of the writer. And this, not with a view to promote controversy, but to encourage and invite candid inquiry:

Cooper's Point, April 17th, 1799.

Respected Friend,

Kind Providence having placed me in a situation of life which obliged me to procure a living by industry, and that principally in the agricultural line, it has caused me to be a strict observer of the works of nature, with respect to such parts of the vegetable creation as have come under my particular notice, and have been greatly embarrassed at the opinion very generally entertained by farmers and gardeners, that changing seeds, roots and plants, to distant places, or different soils or climates, is beneficial to agriculture; such opinion not agreeing with my observations or practice. This induced me to make many experiments on that head, all of which, in more than forty years' practice, have operated to my satisfaction, that the above opinion is well founded; and if so, must be extremely detrimental to agriculture, as it turns the attention of the husbandman from what appears to be the best method, viz. that of selecting seeds and plants, for sowing, from such vegetable roots, to the soil which they are to grow in.

What induces me to think so, is, that I have observed, that the same kind of seed, when sown in different soils, or at different times, or in different climates, will produce different crops. I have observed, that the same kind of seed, when sown in different soils, or at different times, or in different climates, will produce different crops. I have observed, that the same kind of seed, when sown in different soils, or at different times, or in different climates, will produce different crops.

ments, out of a great number, which have all combined to prove the above, to my satisfaction.

In or about the year 1746, my father procured the seeds of the long warty squash, which have been kept on the farm ever since, without changing, and are now far preferable to what they were at first. Our early peas were procured from London, the spring before Braddock's defeat, (1756,) and have been planted successively every season since, on the same place. They have not been changed, and are now preferable to what they were when first obtained. The seed of our asparagus was procured from New York, in the year 1752, and since that time I have not planted a seed, except what grew on my beds; and by selecting the seed, from the largest stalks, I have improved it greatly.

A complaint is very general, that potatoes of every kind degenerate, at which I am not surprised, when the most proper means to produce that effect is constantly practiced; to wit, using or selling the best, and planting the refuse; by which means, almost the whole of those planted are the produce of plants the most degenerated. This consideration induced me to try an opposite method. Having often observed that some plants or vines produced potatoes larger, better shaped, and in greater abundance than others, without any apparent reason, except the operation of nature, it induced me to save a quantity from such only, for planting the ensuing season, and I was highly gratified in finding their production exceed that of the others, of the same kind, planted at the same time, and with every equal advantage, beyond my expectation, in size, shape, and quantity; by continuing the practice, I am satisfied that I have been fully compensated for all the additional trouble.

A circumstance happened respecting potatoes, which may be worth relating: a woman whom I met in market, requested me to bring half a bushel of sweet potatoes for seed, the next market day, which I promised to do; but going through the market on that day, previous to her son's coming for the potatoes, I observed the woman selling such as I had brought for her; when the boy came, I asked him the reason they wanted potatoes for seed, while they were selling their own. His answer was, that his father said, if they did not get seed from me, once in three or four years, their potatoes would be good for nothing. Query—if he had used the same means in selecting his potatoes for planting, as I did, whether he would have profited by changing with one who used the other method?

In discoursing with a friend, who lived at a great distance from me, on the above subject, he mentioned a fact in favour of changing seed. Some radish seed which he had from me, produced radishes preferable to any thing of the kind ever seen in that neighbourhood, which was near 100 miles distant; but in two or three years the radishes degenerated, so as to be no better than what he had before. I asked his method of saving his seed. He said he had no other radishes in his garden, and when they had pulled what was fit for use, let the others go to seed. I then told him my method, viz. As soon as the radishes are fit for use, I dig up ten or twelve of those which please me best, as to colour, shape, &c. and plant them at least 100 yds. from where any others bloom at the time they do; this, I informed him, was the best method I knew of to improve any kind of vegetables, varying the process agreeably to their nature. I asked him if he thought I should be benefitted by exchanging with him? His answer was, he believed I was the best gardener.

In or about the year 1772, a friend sent me a few grains of a small kind of Indian corn, the grains of which were not larger than goose shot; he informed me by a note that they were originally from Guinea, and produced from eight ears on a stock.

to answer the description, but the ears were small, and few of them ripened before frost. I saved some of the largest and earliest, and planted them between rows of the larger and earlier kinds of corn, which produced a mixture to advantage; then I saved seed from stalks that produced the greatest number of the largest ears, and first ripe, which I planted the ensuing season, and was not a little gratified to find its production preferable, both in quantity and quality, to that of any corn I had ever planted. This kind of corn I have continued to plant ever since, selecting that designed for seed in the manner I would wish others to try, viz: When the first ears are ripe enough for seed, gather a sufficient quantity for early corn, or for replanting, and at the time you wish your corn to ripen generally, gather a sufficient quantity for planting the next year, having particular care to take it from stalks that are large at bottom, of a regular taper, not over tall, the ears set low, and containing the greatest number of good sizeable ears, of the best quality; let it dry speedily, and from this corn, plant your main crop; and if any hills should miss, replant from that first gathered, which will cause the crop to ripen more regularly than is common: this is a great benefit.

The above method I have practiced many years, and am satisfied it has increased the quantity, and improved the quality of my crops, beyond the expectation of any person who had not tried the experiment. The distance of planting corn, and the number of grains in a hill, are matters many differ in. Perhaps different soils may require a difference in both these respects; but in every kind of soil I have tried, I find planting the rows six feet asunder each way, as nearly at right angles as may be, and leaving not more than four stalks on a hill, produces the best crop. The common method of saving seed corn, by taking the ears from the crib or heap, is attended with two disadvantages; one is, the taking the largest ears, which have generally grown but one on a stalk. This lessens the production; the other is, taking ears which have ripened at different times, which causes the production to do the same.

A striking instance of plants being naturalized, happened by Col. Matlack sending some water melon seed from Georgia, which, he informed me by letter, were of superior quality: knowing that seed from vegetables, which had grown in more southern climates, required a longer summer than what grew here, I gave them the most favourable situation, and used glasses to bring them forward, yet very few ripened to perfection; but finding them to be as excellent in quality as described, I saved seed from those first ripe; and by continuing that practice four or five years, they became as early water melons as I ever had.

Many admit the importance of a change of seed, from the fact of foreign flax seed producing the best flax in Ireland; but when it is considered that it is the bark of the stalk only that is used in Ireland, and that this is in the best perfection before the seed ripens, the argument fails when applied to other vegetables.

For many years past, I have renewed the whole seed of my winter grain, from a single plant which I have observed to be more productive, and of better quality than the rest; a practice, which I am satisfied has been of great use; and I am fully of opinion, that all kinds of garden vegetables may be improved by the foregoing methods, particular care being taken, that different kinds of the same species of vegetables are not in bloom at the same time, near together, as by this bad practice, they mix and degenerate.*

* The above remark of an observant, practical agriculturist has so often been confirmed by the observations of others that no doubt can be entertained of its

I am sensible the foregoing will meet with great opposition and contradiction, but as an experiment is safe and easy, I hope it will induce persons of more leisure, ability, and observation than myself, to make trial, as a mean of improving the agriculture of our country.

Such is the sincere wish of thy friend,
JOSEPH COOPER.

HORTICULTURE.

SEA-KALE.

Directions for cultivating the Crambe Maritima, or Sea-Kale, for the use of the table. By William Curtis, author of the Flora Londinensis, Treatise on Pasture Grasses, and a variety of works on gardening, &c.

(Concluded from Am. Farmer, p. 45.)

The following are the essential particulars of the mode of culture pursued by Mr. Maher, already mentioned. Prepare the ground in December or January, by trenching it two spits deep; and if the soil is not naturally free and light at the bottom, render it so by sand, vegetable mould, and under-draining. Then divide the plat into beds four feet wide, with eighteen-inch alleys between them; this done, at the distance of every two feet each way, sow five or six seeds, two inches apart, in a circle of about four inches diameter: this operation must be performed with the utmost exactness, bearing in mind that each circle or stool of plants, is afterwards to be covered with a blanching pot, (fig. 1, or fig. 2.) In the following May, or June, the plants will appear, and as soon as they have made, three or four leaves are to be thinned out to three, as regularly placed as possible: Water, if the season be dry; and pick off all insects by hand the moment they appear. Trust to no nostrums or quackeries; but apply the finger and thumb the moment you see the turnip-fly or wire-worm begin to attack them. Cover the beds with earth, sand, and leaves, to the depth of 3 inches in November, and lay over that covering 6 inches of littersy dung.

In the spring of the second year, when the plants are beginning to push, rake off the stable litter, and add a little fresh loam and sand. Abstain from cutting, and dress in November as before.

The third season, a little before the plants begin to stir, rake off the winter covering, laying on an inch of pure dry sand or fine gravel. Then cover each stool of plants with one of the blanching pots (fig. 1,) pressing it very firmly into the ground, so as to exclude all light and air; noting this particularly, that both the colour and flavour of sea-kale

accuracy. The fact is one of the most powerful proofs of the sexual doctrine of plants, and is strongly confirmed by the familiar example of the certain degeneracy of squashes and pumpkins, if grown near gourds; the latter even communicate an emetic quality to their neighbours. In like manner, melons will degenerate if planted near squashes or pumpkins. A case is recorded in the law reports, of an action which was brought against a gardener near London, in the reign of Charles II. for selling cabbage seed instead of cauliflower seed. On trial it appeared that both had been planted near each other, by the purchaser; and to this error, the gardener contended that the degeneracy of the true seed which he had sold, was owing. But he lost his cause in consequence of the prevailing ignorance of the sexual doctrine of plants: posterity, however, has rescued his name from the imputation of a cheat. The fact quoted by Mr. Wm. Young, in page 53, may be adduced as another argument in favour of the propriety of attending to the caution of Mr. Cooper.

This fact and the consequences of it, show that lawyers should attend to agricultural and horticultural knowledge, as well as to mere professional acquirements. In an agricultural country, it is peculiarly incumbent on them, both for the purposes of justice, and their personal advantage.

are greatly injured by being exposed to either one or the other. *Hort. Trans.* vol. i.

Mr. Barton, already mentioned, differs from Mr. Maher in cutting from one-year-old plants; but the reasons he gives for the practice are important, viz. "the prolongation of the season of sea-kale;" for he has found, after several years experience, that "one year old plants come in much later in spring than old established roots." *Caled. Hort. Mem.* vol. ii.

Such as are partial to this plant and possess the means, may have it produced for a much longer period, by forcing the early crops; nothing more being necessary than to place over each plant a large pot, as in one of the modes of blanching already recommended, and cover the pots with long dung to a considerable thickness; the heat of the dung brings forward the plant, while the pot keeps it from coming in contact with the dung itself; and as the growth of the plant is by this means greatly accelerated; it is of course rendered more tender, as well as sweeter.

You may begin forcing this plant by the beginning of December, and at the same time that you use horse dung, which has a considerable degree of heat in it, for forcing some of your plants, you may cover over a part of your others with what the gardeners term mulsh, that kind of horse dung or litter which is little better than straw; this, if it only preserves the plants from cold, will greatly forward their growth; and thus, by a judicious application of forcing, you may have sea-kale in perfection from Christmas to Whitsuntide.

Such are the modes of treating this plant, which experience has sanctioned; but we apprehend much labour and expense may be saved by adopting a different mode of forcing it, especially when practiced on a large scale, by bringing the plants fit for that purpose into a smaller compass; that is, by taking up at the approach of winter the roots of such plants as are sure to flower, cutting away their side branches, and shortening the root to the length of nine or twelve inches, and placing them four or six inches asunder; they may be forced in a frame, or in any other way that the gardener's ingenuity shall suggest; as the plants thus used will be rendered of little value, care must be taken to have a regular succession of them for this purpose, should it be found to answer.

The following are the opinions of seven excellent gardeners, all of whom have written on this subject. They agree that sea-kale is remarkably easily forced; and Mr. Nicol, and that excellent amateur horticulturist, Mr. Niell, both remark, that vegetables are seldom improved by forcing; but that sea-kale forms an exception, "the forced shoots produced at mid-winter being more crisp and delicate in flavour than those procured in the natural way in April or May."

Abercrombie, Nicol, and Maher, recommend forcing in beds in the open air. "Seven weeks," the former observes, "before the time at which you wish to cut shoots for the table, begin to prepare the plants for forcing, and to ferment a sufficient quantity of fresh stable-dung."

"Having trimmed the leaves from the plants, carefully point the surface of the ground; and over the tops of the roots, spread fresh light earth, mixed with drift-sand or coal-ashes, two or three inches in depth. When the dung is well prepared, which will be in about three weeks, proceed to the forcing. If you mix tree leaves with the dung, begin to ferment them a week or fortnight sooner. Cover each of the plants, either with a regular blanching-pot, or with a garden-pot of the largest size. When the latter is employed, stop the hole with a cork, and cement it with clay, to keep out both the weather and the rank steam from the lining. Then lay a portion of prepared dung, alone, or mixed with tree leaves, about and over each

pot, pressing it down firm, extending it eight or ten inches all round, and raising the bank six or eight inches above the pot. It will be necessary to examine the plants frequently, and to measure the heat within the covers now and then, lest, by some inadvertency, the quantity of litter should not have been well apportioned or rightly prepared. If the heat be under 50°, there is not heat enough to excite the plants; and if above 60°, it is too fiery, and may injure them. In about three weeks or a month after being covered up, the first shoots will be from six to ten inches long, and fit for the table. If the plant send up a flower-stalk, cut it away; and successive supplies of shoots will be produced, till perhaps the end of the third month from beginning to force."

The only thing necessary in forcing sea-kale, Maher observes, is to be very particular in guarding against too much heat, using trial-sticks, and never, if possible, exceeding 55°. So much mischief ensues when this is violent, that it is far better to begin time enough, and force slowly, rather than quickly. Like Abercrombie, Maher covers with dry sea-coal ashes, sifted neither very small nor very large. These are the best remedy against worms, which, after forcing is commenced, often spring up on the surface, and spoil the delicacy of the young shoots. Salt, he adds, also effectually destroys worms, and will not injure sea-kale.

Unless the weather be unusually rigorous, it will not be necessary to renew the linings of hot litter oftener than once in seven or eight weeks. Abercrombie directs to take away the exhausted part, and mix the remainder with fresh dung and leaves. Maher says, after the sea-kale is gathered, the dung will be found in the finest possible state for spring hot-beds. When the stools will produce no more shoots, remove the litter and the covers, and dress the ground, in order, as observed by Maher, that their leaves may be suffered to grow, and acquire and return nutriment to the root for the next year's buds. Nicol says, he knows an instance of a row of sea-kale having been forced in the above way every season for seven years, in which the plants in it are as vigorous and healthy as others in the same quarter that are forced only every second year.

Barton forces sea-kale on dung-beds, under frames, exactly in the manner generally adopted for asparagus. The advantages he considers to be the certainty of having the vegetable fit for use at any particular time, and the saving of dung and labour. The latter saving, he says, "must appear obvious to every practical gardener, when he considers the difficulty attending the keeping up a proper and regular degree of heat, by covering with dung over pots, and other similar methods, (as generally practiced,) at so inclement a season of the year; requiring three times the quantity of dung to produce an equal number of heads, to what will be necessary when the roots are placed in the frame; for a common melon-frame will contain as many heads as are capable of being produced in two drills of twenty yards each, by covering with hot dung. He finds two frames, of three lights each, quite sufficient for a large family: the first prepared about the beginning of November, and the second about the last week in December; and by the time the second frame is exhausted, sea-kale will be ready for use in the open ground." *Caled. Hort. Mem.*

W. Gibbs, of Inverness, (*Caled. Mem.* vol. i. p. 384.) also forces in frames, blanching by keeping the beds covered with mats. Economy and certainty he considers to be the advantages attending this mode. As the plants are no longer of use after being forced, a succession is kept up by annual sowings; and the plants are allowed to attain three years growth before taking up for forcing.

Baldwin forces sea-kale where it stands in open garden in the following manner: "in the side of a three-foot bed, (fig. 3, 1.) in wu

sickly as to be unable to leave the hive, and continue declining until they at last die.

From paying attention to this subject, I am convinced, that the cause is as follows: The young bees, for a short time previous to their leaving their cells, and some time after, require being fed with the same regularity that young birds are by their parents; and if the store in the hive be exhausted, and the weather such as not to admit of the working bees going abroad to collect food in sufficient quantity for themselves and their brood, the powerful principle of affection for their young compels them to part with what is not enough for their support, at the expense of their own lives.

To prevent such accidents, I make it a rule, that if, during the breeding season, it rain for two successive days, to feed all the bees indiscriminately, as it would be difficult to ascertain those only who require it.

Of Swarming.—For several years past, my hives have uniformly sent forth their first swarms during the second week in July, from which it appears, that early or late swarming in the same situations is not so much regulated by good or bad seasons, as might have been expected. Near the sea, this will, of course, take place some weeks earlier.

The first swarming is so long preceded by the appearance of drones, and hanging out of working bees, that if the time of their leaving the hive is not observed, it must be owing to want of care. The signs of the second are, however, more equivocal, the most certain being, that of the queen, a day or two before swarming, at intervals of a few minutes, giving out a sound a good deal resembling that of a cricket. It frequently happens, that the swarm will leave the old hive, and return again several times, which is always owing to the queen not having accompanied them, or from having dropt on the ground, being too young to fly to a distance. In such cases, I have seen her found near to the old hive; and on being taken up and placed in the new one, the swarm instantly settled.

Gooseberry or currant bushes should be planted at a short distance from the hives, for the bees to swarm upon, as, by attending to this, I have not lost a swarm by straying for several years. This, I am however convinced, depends much on the nature of the bees which form the stock. When a hive yields more than two swarms, these should uniformly be joined to others that are weak, as, from the lateness of the season, and deficiency in number, they will otherwise perish. This junction is easily formed, by inverting at night the hive in which they are, and placing over it the one you intend them to enter. They soon ascend, and apparently, with no opposition from the former possessors, as I have never observed fighting to be a consequence.

It being very universally believed, that two queens cannot live together in the same hive, I have for several days after this forced junction, searched for the murdered queen, but never with success. Should the weather, for some days after swarming, be unfavourable for the bees going out, they must be fed with care until it clears up, otherwise the young swarm will run a great risk of dying.

Method of obtaining the honey without killing the Bees.—The Society will see, from the peculiar structure of the hive, with which I accomplish this object, that I was under the necessity of making it of wood, in place of straw, which, for the reasons before given, I should have preferred.

It consists of two distinct hexagons, one placed above the other. The under is formed of six panes of half inch deal, each measuring ten inches in width, and eight in depth, and covered with a thin board at top. This forms a box that will contain two pecks measure of corn, and which I consider as sufficient for the largest swarm. This is intended for the breeding, as well as winter habitation of the bees. The upper is of the same dimensions and

form as the under at bottom; but in order to give it a conical shape, for the more conveniently fixing thereon a coat of straw, the panes at top are only five inches wide, which is also covered by a piece of board. The upper box has a moulding fixed to its under part, which projects about a quarter of an inch, and so exactly embraces the upper part of the lower box, as to join these two firmly together. In the deal which forms the top of the lower box, are cut four oval holes, each one inch wide, and two inches long, through which the bees pass into the upper. This communication, when not wanted, is shut by a board, which moves on a nail in its centre. The small pane of glass in the top of the upper box, admits of seeing the progress the bees have made in it, without separating it from the lower one.

When the swarm is first put into the lower box, the communication is shut with the upper, until the bees have completely filled the lower with combs. The communication is then to be opened, when the bees will ascend, and if the season is favourable, and the swarm numerous, they will fill it also, but not until they have completely stocked the lower. By removing the straw covering, and looking through the glass in the upper box, it may be seen what honey has been collected. Should a part or the whole of it be wanted, it will only be necessary carefully to separate the upper from the lower box, and shut the board of communication. The upper box is then to be removed to some distance, and the bees contained in it, driven off, on which they will immediately join their companions in the lower. So soon as the honey is taken from the box, it can be replaced, and if early in the season, the communication opened for making more honey, but if late, it must be kept shut until the hive has swarmed next summer. If honey-comb early next season is preferred to a swarm, then the communication must be opened about the beginning of June.

All the honey procured in this way is remarkable for its purity, none of the cells having been ever polluted by the hatching of young bees.

The greatest advantages, however, from this method, are the early and large swarms,—the consequence of not killing the bees.

Conclusion.—I shall conclude this essay with some curious facts in the history of the bee, which presented themselves to my notice during the management of this singular insect.

1st. I have frequently observed that, during swarming, the twig or branch which supported the swarm, weighing from five to six lbs. or 30,000 bees, had its surface completely covered with the first 300 or 400 that alighted upon it, the remainder of the swarm having their whole weight supported by that small number, which, in any other situation, must have torn them to atoms.

2dly, That light is not necessary to the labour of bees, or if it is, it must be in a degree incomprehensible to us. The passage to the abode of the humble bee, is often a zigzag several yards in length, through which it appears impossible for any light to pass.

3dly, Bees are entirely directed to their food by smell, as appears from the following experiment. I placed in a tea-kettle a cloth, through which I had strained some honey, and after fixing the lid, I put it on the ground about 200 yards to the windward of some hives. I was soon after much amused in seeing a number of bees following the different windings of the scented breeze, until they reached the spout of the kettle, which they immediately entered.

4thly, Killing the drones by the working bees, when the breeding is at an end, is performed in a singular way, and done by one bee in general. It almost uniformly fixes on the drone, at the insertion of the left wing, when it tears with its fangs the muscle which moves the wing, so that when thrown from the stand of the hive, it cannot again rise, and

is usually killed by the cold of the following night. No stinging or other violence is ever used; and although the drone is four times the size of his executioner, no attempt at retaliation is ever offered.

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

A WHISPER TO THE WIFE.

[Continued from p. 46.]

Chapter IX.

ON THE MANAGEMENT AND EDUCATION OF CHILDREN.

A lovely infant now crowns your mutual wishes. What a bond of union! What an incentive to tenderness! Lives there a man who can look at the mother of his pretty babe, and not feel his heart irresistibly drawn towards her? While the simple reflection, "This is the father of my child!" should make the husband to his wife the dearest object in the world—

"Thus, for the parent's sake, the child is dear,
And dearer is the parent for the child."

A little child is an uncommonly interesting object! An immortal soul confined in such a fairy form; a little being for whom the blood of Jesus was shed; an epitome of God's greatest, noblest work; "a miniature pledge," as the great poet Goldsmith says, "who may be one day the guardian of the liberties of Europe, the bulwark and honour of its aged parents." And when a mother sees the divine faculty of reason sparkling in its little eyes, and issuing in lisping accents from its ruby lips, how fervently ought she to implore that Christ would be the Shepherd of her little lamb, that he would carry it in his bosom, that he would in this life shelter it in his fold, and after death place it among the cherubim which surround his throne!

The first duty which nature points out to a mother is, to be herself the nurse of her infant. Let no motive, gentle lady, except want of health, induce you to surrender this endearing office to a stranger. The custom of sending a baby to a distant hut to be nursed, is now so much exploded, that it is almost unnecessary to dwell on the subject. What! to send the pretty babe from your home and your bosom, from all the love and watchfulness its helplessness so strongly calls for; to send it to be nursed and cradled among strangers; to allow the first dawns of its reason to beam in the atmosphere of vulgarity, meanness, and even vice! Forbid it, mothers! Should circumstances render it inconvenient to bring a wet-nurse into the house, sooner, a thousand times, would I rear the pretty babe, in nursery phrase, with the spoon, than treat it with such unkindness and injustice. And now, after the lapse of a year or two, the poor baby, ill-reared, and alienated from its family, is brought home. His little heart pines, and saddens; and he cares not for any body, nor any thing, in the fine house he has got into. His nurse, and fosterfather, and Billy, and Peggy, and the cat, and little Beauty the dog, are all the world to him. And the hawthorn tree which grows at the cottage door, and the clear stream which runs in the adjoining field, have more charms in his eyes, than his father's fine-spreading chestnuts and cultivated grounds. He is a pet with no one, and no one is a pet with him. His more fortunate brothers and sisters are all preferred before him, and, untutored and neglected, no pretty ways endear him to his family, no pretty words issue from his little untought lips. But I will suppose better things of you, and drop the subject for the present.

Do not, if it can be avoided, wean your child till it is twelve months old; and when compelled to inflict on it this its first misfortune, do it with mercy; not suddenly nor decidedly, but slowly and by de-

greases; giving it for the first week suck only twice or thrice a day; then only once; and then dropping it entirely in the day, but continuing it at night for some little time. And thus will the pretty babe be spared an anguish which even the Almighty seems to wish to awaken the mind to, when in his holy book we find those words: "My soul is brought low even as a weaned child."* I really do not well understand why people remark it is best to wean a child at eight or nine months old, when experience so decidedly contradicts them. Look at the children of the peasantry. Mark the health which sparkles in their eyes, and the strength which gives activity to their little limbs; and yet those children are seldom weaned even so early as twelve months old. "I never knew child or mother injured," said a clever and humane physician, "by a late weaning."

I have often thought man could learn from an infant a sweet lesson of love and gratitude. In the act of weaning, has any one observed its countenance in all the eagerness of hope and anxiety, seeking round for the beloved face of her from whom it has derived its support? Mark the expression of each little feature; mark the apathy with which it turns from every other face; and when it has discovered the object dearest to its little soul, the flushed cheek, the delighted eye, the shout of joy, the eager spring to reach her arms—all indicate the extacy and triumph of the interesting creature: and one longs to lavish kisses and caresses on him. And is it love for the very object herself which causes these emotions? Yes, truly: for though another nurse appears who could just as well supply him with the beverage he is languishing for, he regards her with aversion, and turns away with screaming indignation.

The following rules, written by the directors of the Universal Dispensary for Children, and recommended by the late Queen Charlotte's physician, will not, I trust, be considered irrelevant, and perhaps may be acceptable to the young mother.

"Proper nursing tends to preserve the human species. The mother's breast is the infant's birth-right. Feed an infant in an upright posture: it gives uniform distension to the stomach. Expose it early to the air: it keeps it from cold. Place it, while asleep, on its right side: it obviates indigestion. Attend to its cries: it never cries when well and at ease. Encourage it to stretch out its limbs, and to creep about: it promotes strength and activity. Rub it morning and night all over with the hand: it promotes circulation. Never awaken an infant out of sleep by rough means: it may produce fits. Avoid the use of tight bandages, particularly round the body. Avoid quack medicines and old women's nostrums. In case of illness, once call in medical aid. Avoid feeding infants heavily: it produces griping. And beware of over-feeding. A warm nurser, admit a current of air through the room: that will allow the infant to breathe freely. The same arm: violent laughter weakens their lungs. Give it a small quantity daily. And not at night."

make it hardy, let its petticoats be very short, and its arms and bosom be exposed to the air. Let it sleep in the middle of the day, till it is three years old; put it to bed at seven o'clock, and let it rise early. Plunge it every morning into cold water, beginning in warm weather, and continue it every season after. If the child should be delicate, let the chill of the water be slightly taken off by adding a little warm water to it, until the child gets hardy. Be particular in the choice of the servant who attends your baby; and, if possible, let some one of the family accompany her when she takes it to walk. To rest her arms, she will often most injuriously place it on the damp ground, or go into a house infected perhaps with whooping cough, small pox, or some infantine disease: and then, instead of the benefit of air and exercise, the poor baby is kept sitting in her lap, while she perhaps gabbles away anecdotes of the family she lives with. In a fit, loosen the child's clothes, raise the head, place it near an open window, sprinkle the face with cold water, rub it all over with your warm hand, tickle the nostrils and inside of the ear with a feather. Let it be moved as little as possible; put it in a warm bath, or keep a succession of warm flannel round it. To an infant, give five drops of hartshorn in a little water; to a child of two years old you may give ten; but give it with caution, to prevent it going against its breath."

(To be continued in our next.)

CONJUGAL HAPPINESS,

AS RESULTING FROM MUTUAL AND WELL REGULATED ATTACHMENT.

"But happy they! the happiest of their kind!
Whom gentler stars unite, and in one fate
Their hearts, their fortunes, and their beings blend.
'Tis not the coarser tie of human laws,
Unnatural oft, and foreign to the mind,
That binds their peace, but harmony itself,
Attuning all their passions into love;
Where friendship full exerts her softest power,
Perfect esteem, enliven'd by desire
Ineffable, and sympathy of soul;
Thought meeting thought, and will preventing will,
With boundless confidence: for nought but love
Can answer love, and render bliss secure.
Let him, ungenerous, who, alone intent
To bless himself, from sordid parents buys
The loathing virgin, in eternal care,
Well merited, consume his nights and days:
Let barbarous nations, whose inhuman love
Is wild desire, fierce as the suns they feel;
Let eastern tyrants, from the light of Heaven
Seclude their bosom-slaves, meanly possess'd
Of a mere, lifeless, violated form:

While these whom love unites in holy aid
And eq. as Nature live
And eq. as Nature live
And eq. as Nature live

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and call

Surprise so often, while you look around,
And nothing strikes your eye but sights of bliss,
All various nature pressing on the heart:
An elegant sufficiency, content,
Retirement, rural quiet, friendship, books,
Ease and alternate labour, useful life,
Progressive virtue, and approving Heaven.
These are the matchless joys of virtuous love;
And thus their moments fly. The seasons thus,
As ceaseless round a jarring world they roll,
Still find them happy; and consenting Spring
Sheds her own rosy garland on their heads:
Till evening comes at last, serene and mild;
When, after the long vernal day of life,
Enamour'd more, as more remembrance swells
With many a proof of recollected love,
Together down they sink in social sleep;
Together freed, their gentle spirits fly
To scenes where love and bliss immortal reign."

SPORTING OLIO.

RURAL SPORTS.

[The season is at hand for making up parties for occasional excursions to the country, "where blooming health exerts her gentle reign." How much better to repair to the fields, the woods, or to the neighbouring streams, at the close of a week of hard study or sedentary labour, and there spend the afternoon in gunning, fishing, swimming, bowling at nine-pins, pitching quoits, &c., according to one's fancy and the season, than to abuse whole days in militia mustering! frequenting gaming-houses, whiskey drinking, &c.

The sedentary and oppressive occupations of a city life, which beget

"Deserted of its bloom; the flaccid, shrunk,
And withered muscle, and the vapid soul,"

require to be counteracted by refreshing amusements that are only to be found in the country; and for all such healthful and innocent enjoyments, no city possesses greater facilities in its immediate vicinity, than Baltimore. There is not a road, nor a water course, that does not afford beautiful situations for recreations such as we have mentioned. In other large cities, in summer season especially, on Saturday afternoons the whole population is in motion. We do not recollect ever to have passed a more pleasant day than at a quoit club party in the neighbourhood of Philadelphia. They meet every Saturday, under the following rules of association:]

RULES OF THE PHILADELPHIA QUOIT CLUB.

1. The number of members shall be limited to 20.
2. To become a member, a gentleman must be proposed at a meeting; and in case of a vacancy, be ballotted for on the succeeding club day. Should the number be complete, the Secretary shall keep a list of candidates to be ballotted for when vacancies happen in the order they were proposed.
3. Two black balls shall exclude a candidate, and no ballot shall take place unless there be at least 13 members present.

The meeting shall be held on the first of each month, at 7 o'clock, at the residence of the President.

Each member shall be given a ballot (than straw) for proposing the President of the day. The President shall have the liberty of inviting two friends.

7. The Secretary shall, or some other member, shall attend to the business of the club, and shall have the will

*Wine might be dispensed with to advantage. The subscription be not held, or let them be held, as they see fit.

coits, &c. locked up in the evening, and to deliver the key to the President of the succeeding day.

8. No hot dishes to be allowed on any account, except vegetables. The penalty for infringing this rule shall be 1 dozen of Madeira for the use of the club.

9. A Secretary and Treasurer shall be appointed; the latter the oldest member, and the former the youngest member of the club.

10. The duty of the Secretary shall be, to purchase the wine, &c. and to give his orders upon the Treasurer for the amount.

11. The duty of the Treasurer shall be, to take charge of the subscription money.

12. The accounts of the Secretary and Treasurer to be settled annually on the 31st December.

13. On the first meeting of the club, each member shall pay to the Treasurer 25 dollars, and be liable to be called upon for their proportion of any additional expense.

FOX HUNTING.

EXTRACT TO THE EDITOR FROM AN OLD SPORTSMAN.

With regard to staghounds, that they are to be had of this name, there is no doubt, but they can only be found in the king's pack. The subscription packs and those of the nobility, are accustomed to run the fox, as well as deer, and of course have more speed, and ever since the days of Meynel, have been increasing in speed. In the king's pack as in all others, they annually discard the old hounds, to make room for the young ones; packs being limited to number. These cast hounds are the perquisite of the whippers in, to sell for the carcase and hide. I never saw but one of these dogs, and that by accident in Philadelphia market, on a very rainy day. He was in height and frame the largest dog I have ever seen, finely proportioned, and with a note of thunder. The owner could not be found. I shall not feel disappointment if you fail in procuring a pair.

At one period of my life and for many years, I pursued the chase with great ardour, never hunting more than six couple of dogs. I went out twice a week. Glad to see a full field of horsemen, but never suffered strange hounds among mine. I would not recommend more than fifteen couple for a subscription hunt, but these to be equally matched in speed and bottom, but varying in colour and tongue. Blowing dogs are always slower than yelpers, and slow dogs are not only most certain to kill, but are less laborious to follow. But one person should hunt the dogs, aided by an attendant, or if you please a whipper in, and there should be a fine for overriding the dogs on the drag. The dogs should be all kept at one kennel, that they may become acquainted with each other and the huntsman. As soon as you can, discard all the babblers, cutters, and such as after a smart run take to horse, keep none but busy working dogs.

I always hunted in the old English jacked leather cap, covered with black velvet. It has many advantages: First, you are not apt to lose it, and last and not least it protects your head in case of a fall, or the stroke of a limb. The coat over a spencer, next your waistcoat should be made somewhat in the form of the common frock coat, standing collar, and so straight before that when mounted, you can conveniently cover your knees with it in case of rain, and on account of bushes, snags and briars, should not be longer than to cover your knees. A neat belt of two buckles for your waist, in which you hang the dog's couples and your horn. In this belt you can also hang a hautboy, clarinet, or other wind instrument; these with a French horn or keyed bugle, will animate the scene upon the death of the fox.

The huntsman should alone use the horn, except

when all are together. A blue grey cloth looks and wears clean, and is not subject to tarnish from rain.

During my hunting days, our dogs became too fast for real sport. We mounted, had just time to say a short prayer for our neck's safety, and the devil take the hindmost.

MISCELLANEOUS.

AGRICULTURAL MACHINES AND IMPLEMENTS.

Catalogue of Improved Agricultural Machines and Implements, for sale, and made to order, at the New York Agricultural Repository—By William Torrey, jun.

"He that tilleth his ground, shall have plenty of bread."

Solomon.

[An acquaintance of several years has inspired the Editor of this paper with confidence in, and respect for Mr. Torrey.]

Orders from any part of the United States, South America, or the West Indies, executed with promptitude, and the articles shipped free of charge. A liberal credit is given when a quantity exceeding \$100 is purchased. Agriculturists may depend upon receiving well-made articles, as the Proprietor of the Repository is determined not to manufacture except in a workmanlike manner.

The numbers in this catalogue commence with the smallest or lowest priced articles.

CORN SHELLERS.

Patent Plate Machine.—These machines are perfectly simple, cannot get out of order, and do their work effectually. The quantity shelled will depend upon the number of hands employed in feeding the machine, as it will shell as fast as the corn can be thrown in.

Two men working steadily will shell in a day (of ten hours,) from 150 to 200 bushels of (shelled) corn, or 300 to 400 bushels in the ear. The cob is not broken, and the work is cleaner done than by horses or flails. Price \$15 to \$20.

Cylinder and other corn-shellers are in use, but do not answer a good purpose.

CORN MILLS.

Various machines have been offered to the agricultural public for grinding Indian corn and other grain, by hand, but they are all greatly deficient, requiring an exertion of strength beyond the capacity of one, or even two men. Perhaps the best are the imported large mills similar to post coffee-mills. These will, however, only crack the grain. In the Repository, is an improved *horse mill*, with French burr stones, the runner revolving vertically. It is calculated for the power of one horse, and will crack 75 bushels of corn per day, and also grind fine. Price, without horse power, \$50.

CHURNS.

Burder's Box Churn.—This is an oblong box containing a dasher which revolves, which when the butter is made, is taken out. It is by far the best churn ever invented. With it, butter can be made in a short time, with little labour. The sizes are various. Prices \$34 to \$8.00.

Cradle Churns; Barrel Churns; Common Churns.

COFFEE MACHINES.

Similar in outward form to fanning mills, but differing in the inward arrangement, and also much larger. They are calculated to clean the coffee from the chaff, and also to separate the large and small grains; can also be taken apart. Prices \$50 to \$100.

CHAFF CUTTERS.

Hill's, three knives, \$45; Passmore's, four knives, \$75; Rowntree's, two knives, to cut different lengths,

\$75; Improved, two knives, \$25; Common Cutting Boxes, \$3 to \$7.

All the chaff cutters used in our country, even patent, are copied, with slight alterations, from the English ones, of which the three first named are the best. They all, however, do their work well, if made well, and cut remarkably fast. The greatest economy a farmer can use, if he has a large stock, is to purchase the best. For a moderate size stock, the improved two knives will answer well. The common cutting box is well known, and there are at least a dozen others, which are called patent, the most of which will be made to order.

PLOUGH CASTINGS.

Wood's, (Freeborn) Hitchcock's, Stevens', Dutcher's, &c.; comprising mould-boards, land-sides, and shares. A great variety of these is kept constantly on hand, which will be sold low to country manufacturers.

Also, Sleigh-Shoes; Sash-Weights; Machinery, &c. Orders received for castings, and patterns made if required.

DRILLS.

The only Drill much used in this country, is that for sowing turnips. It delivers the quantity of seed required with exactness, and is by far the best method of sowing. They can be so modelled as to sow carrot seed sufficiently regular. Price \$10.

FANNING MILLS.

Great improvements have lately been made in these machines. They are now more portable, clean better and faster, and but seldom get out of order. The cockle and chaff are completely separated from the grain. By a new method of manufacturing, they are now made so as to be taken apart for foreign orders, and packed in boxes, occupying, comparatively, but a small space. Price, common size, \$20—extra, \$25.

FLEXIBLE TUBES.

For relieving cattle that are hoven or choked. This is a highly useful article, which should be owned by every farmer, having a large stock, as in the most simple manner cattle are instantly relieved, when in very dangerous circumstances. The following are the directions for using the tube:

First, put the gag in the mouth of the animal, and buckle it on the neck; then, if choked, insert the concave end, and force down the obstruction. If hoven, insert the conical end, (the whole length will not injure,) and continue it until the air has escaped out of the tube: immediate relief, of course follows. Price per pair, for cattle and sheep, \$6.

HORSE HOES AND CULTIVATORS.

Horse Hoes.—This instrument is invaluable in the cultivation of corn, potatoes, turnips, or any crop in rows or drills. It expands from 12 to 23 inches, cuts out the weeds completely, and earths up on each side, provided the mould-plates are on, or acts as a scarifier with them off. It is more effectual than the hand hoe, lighter than the plough, and with one horse and a boy, more work may be done in the same time with it, than with three ploughs. It is so formed, that it will expand either as a scarifier or a cultivator. The depth at which it acts, is regulated by a wheel at the end of the beam. Price \$15.

Blakie's Horse Hoe, or Scarifier.—Invented by Mr. Blakie, steward of Mr. Coke, of Norfolk, England. It is calculated for all kinds of row culture, and is a valuable implement. It is also useful in gardens, to clean rows of vegetables. Will expand from 8 to 24 inches, and is of light draft for one horse. It acts only as a surface scarifier. Price \$12.

Beatson's Scarifier and Stubble Rake.—This completely pulverizes the soil, and is chiefly intended to act without the plough. For a description of its use, see Gen. Beatson's New System of Agriculture. Price \$20.

AGRICULTURE.

ON SMALL GRAIN—FALLOW CROPS, AND GRASS LAYS.

[From Lorain's Husbandry.]

Remarks on putting in small grain on stubble ground. A degree of merit is justly due to a naked fallow executed in the usual way. The disadvantages arising from that practice considered. The usual mode of cultivating fallow crops contrasted with the practice recommended by the author. Observations on the value of grass lays, and the proper cultivation of them. The red clover plant is destroyed by frequent mowing and close pasturing. Fermentation, properly directed, is the main spring of vegetation.

THE worst system of cultivation in common practice seems to be stubbling in, or annually putting in crops of small grain on stubble grounds. This is too generally practised every where, but especially in the back-woods, until weeds and poverty of soil united, reduce the product so much that the crops fall far short of remunerating the cultivator for the labour bestowed on them. When this happens, he generally resorts to a naked fallow. This is too often badly executed. Still, many of the weeds that would have choked and robbed the plants of much nutriment, are destroyed; consequently, the product is increased in proportion to the food remaining in the soil, and the cultivation bestowed on it.

A naked fallow is certainly a very laborious and injurious practice. It is also equally certain that any soil may be much better prepared for a succeeding crop of wheat, or any other small grain, by a fallow crop properly ordered. Still, a naked fallow should be allowed all the merit justly due to it; especially by those who mean to controvert that practice.

When it is well executed, the soil is finely divided; the animal and vegetable matter which was before locked up in the hard clods of earth, impervious to the roots of the plants, is brought into more immediate use; the enriching and fertilizing matter floating in the atmosphere is more freely absorbed, and better secured, by an open, free soil, than when it rests on one of a contrary description; the roots of the plants are also enabled to dip deeper, and spread wider through the soil, in search of the nutriment provided for them. It is true, if the ground be very sandy, a naked fallow, by opening the texture, makes it less fit for the roots of plants, and causes much injurious evaporation from it; likewise, when an adhesive clay has been finely pulverized, heavy rains, succeeded by a hot sun or drying winds, cause it to bake, and become impervious to the roots of plants: but, except the advantage derived from the shade of the fallow plants, the same happens, both in clay and sand, when the soil is prepared for small grain by a fallow crop cultivated in the usual way.

Jethro Tull, the ingenious inventor of the drill husbandry, grew exhausting crops annually on the same ground, without the aid of manure, although his soil seems to have been thin.

Sir H. Davy says, "Jethro Tull, in 1733, advanced the opinion, that minute earthy particles supplied the whole nourishment of the whole vegetable world; that air and water were chiefly useful in producing these particles from the land."* If Sir H. had quoted the words of this truly great, but very mistaken agriculturist, the question would have been determined. Some years have elapsed since I read Mr. Tull's book on agriculture. If my memory be correct, he attaches more consequence

to the depositions from the atmosphere than Sir H. seems to imagine, and appeared to believe they were conveyed to the soil by the dews. However, Mr. Tull's practice alone is sufficient to determine that vegetation is greatly promoted by finely dividing the soil, particularly when the cultivation is extended to the growing crops. The practice of ages clearly shows, that much more is to be expected from a naked fallow than too many advocates for fallow crops seem to believe. Still, if Mr. Tull had lived until he had divided the soil sufficiently often to have extracted the animal and vegetable matter that the undivided clods contained, also to have decomposed the hard vegetable substances which are always more or less seen, in greater or smaller quantities, in all soils, his opinion respecting enriching manures would have been greatly altered; as was that of Mr. Duhamel, a distinguished agriculturist of the same school, but who lived long enough to see the fallacy of this inconsiderate theory, and also to abandon it.

Having candidly stated every advantage that seems to be derived from a naked fallow, I will enumerate the very serious disadvantages and injurious consequences arising therefrom.

It is an expensive practice. First, the loss of one full year's rent of the soil; secondly, it must be frequently ploughed, harrowed and rolled. After this, it often happens that much manual labour is necessary to break the clods, especially when they are firmly bound together with the roots of the grasses and weeds. These are pushed about by the plough, dragged by the harrow, and sunk into the soil by the roller, but not sufficiently separated by any of them. The remains of them, together with the more finely divided grasses and weeds, are dragged up into heaps by the harrow throughout the whole field. These are raked up into larger heaps and burned, by some cultivators; others suffer them to remain, and when the seed is sown, the harrow, by dragging the heaps, drags up much of the seed with them; and vegetation is destroyed wherever they may happen to lie. In either case a great waste of vegetable matter takes place; for when it is not burned, its best properties are exhaled by the sun, or scattered in the air. Numbers of men, women and children, are sometimes seen in England breaking the hard matted clods into pieces, raking them up into heaps, and burning this very valuable vegetation; which, without any of this enormous waste of labour, might have been very profitably applied to the growth of the crops and improvement of the soil. After the utmost care has been taken to prepare a naked fallow in the usual way, a multitude of the roots and tops of the grasses and weeds remain so intimately mixed within the soil, that they will grow in sufficient numbers to do great injury to the crop, especially if the weather happen to be dripping during the process of cultivation. In that case, the moisture preserves the vegetative powers of the grasses and weeds, and the crop is sure to be much injured by them.

The seeds of the weeds are as often turned under as uppermost by the usual mode of cultivation; consequently, many of them do not vegetate during the process; and those that are not buried beyond the power of germination when the small grain is sown, will grow and injure the crop. If dung is applied for the small grain, it is generally spread previously to seeding, and turned under by a shallow furrow; of consequence, it produces a plentiful crop of weeds: for although the cookers of dung say that the fermentation of it destroys the vegetative property of seed, practice and observation determine the contrary.

In fact, if nature had not calculated seeds in general to withstand much more than the heat of a fermenting dunghill, the earth would long since have been stripped of vegetation, particularly where

ploughers and croppers reside. Like the locust in Egypt, they would soon destroy every green thing, if nature had not reserved seeds for ages unhurt, with which she carefully counteracts so much of the injury done by this class of farmers, as to prevent actual sterility from taking place in the grounds cultivated by them.

Although it is granted, that a naked fallow prepares much food for plants by finely dividing the soil, frequent ploughing and harrowing are calculated to scatter much animal and vegetable matter in the air, especially while the soil is continually exposed to the injurious effects of the sun and air; and unless the bad effects produced by this process be counteracted by excellent management in other respects, it will eventually ruin the soil. If this practice be pursued, under the best mode of management that superior talents can devise, the improvement in the soil will be slow indeed, when compared with that which may be readily effected by the practice of fallow crops properly ordered. It is also evident, that in the latter case the grounds are profitably employed; while in the former they yield nothing, although the farmer is spending much money in the very laborious cultivation of them.

No improvement made in agriculture, has promoted the interest of it so extensively as the introduction of fallow crops. Yet it seems evident, that the various different modes which have been generally pursued in the cultivation of these crops, as well as in that of the cultivated crops following them, are by no means calculated to promote the product of either, or to enrich the soil, to any thing like that extent which might be readily effected with much less labour and expense, if a proper system of cultivation were pursued. If, however, distinct parts of the very numerous and discordant systems of cultivation be selected from the different practices that are commonly pursued by different cultivators, it appears that nothing is offered by me which has not been more or less sanctioned by the actual practice of others. Therefore, the merit of my system of husbandry does not consist in overturning what the practice and observation of ages have introduced; but in uniting into one system such practices as are consistent with nature, reason and common sense; rejecting those only that seem to be inconsistent with either. The undertaking is arduous, especially when ventured upon by a plain practical farmer, who depends not on science, but on nature, reason, practice and observation. In a work of this sort, errors are to be expected; still, as these errors cannot be capital, but little injury is to be expected from them, before they may be corrected by others who are better informed.

Agriculture will never reach its zenith, until the value of grass lays is sufficiently appreciated, and the cultivation of them much better understood. The value of a clover lay, when applied for wheat, is well known; still, most farmers continue frequent mowing or close pasturing, until the clover is nearly run out. This greatly impoverishes the lay; and unless the soil be rich, the wheat crop is light. The clover plant cannot withstand frequent cutting, even during the first season it is mown. This causes the lateral roots of the plants to become weak, and incapable of holding the tap-roots in the ground; and they are thrown out by the frosts of the ensuing winter and spring. The same happens if red clover be pastured, unless a well grown covering of the tops of the grass be preserved, especially to defend the roots and crown of the plant from the frosts of the ensuing winter and spring. If this plant be thus defended, it will far better withstand not only the frosts in the winter and spring, but also the injurious heat of the sun.

Both red clover and speargrass lays are very justly esteemed, by many farmers, as the best pre-

*See his Lec. on Agr. Chem., p. 14.

paration for a fallow crop of maize. Some, either to save labour, or from a just conviction that the value of the crop is also greatly increased, do not turn up the sod in the cultivation of the fallow plants. Too many of them, however, as well as other cultivators, believe the health and vigor of the plants are greatly promoted by harrowing over them while they are young. Some, also, use harrows with sharp cutting tines, for the purpose of cutting through the sod deeply, and as near to the stems of the plants as may be conveniently done without cutting or tearing up. These practices are certainly opposed to the economy of nature, and the enlightened reason of man. None of these gentlemen would wound, bruise, or mangle a young animal, to increase the health and vigor of it; neither would they rend and tear the choice trees in their nurseries, to make them grow better; although less evil would arise from mangling them, as trees are calculated much better to withstand and out-grow this very manifest injury. The practice of mutilating the tops, and separating the roots of plants from their stems, for the express purpose of causing them to grow much more luxuriantly, is not confined to maize: potatoes, and other hardy plants that are capable of withstanding this truly barbarian practice, are too often subjected to it.

Although some farmers do not turn up the sod in the cultivation of maize, all of them, so far as my observation extends, plough it up previously to seeding the small grain that follows this plant. This exposes the rich matter arising from the fermentation of the roots and tops of the grasses, and the dung also, if that has been applied, to a serious waste. It is exhaled by the sun, scattered in the winds, and washed away by the rains and melting snows: fermentation, which is the main spring of vegetation, is checked. None of these evils happens when the small grain is put in by a superficial cultivation, as the rich fertilizing matter remains securely buried within the soil. This nature applies, with the least possible loss, to the use of the cultivated crops and the grasses following, and with the overplus she enriches the soil. The fermentation and decay of this enriching matter more effectually expands and minutely divides the soil, than can be done with the plough. The plough, harrow and roller, with too often the addition of very expensive manual labour, are capable of pulverizing the soil to any desirable extent. After this has been done, it settles, and too often becomes impervious to the roots of the plants, unless the ground be so rich, that it is not materially affected by the loss of the animal and vegetable matter which always takes place, when the soil is cultivated in the usual way.

It should also be recollected, that every crop which is sown broadcast, principally depends on the expanding force of fermentation to keep the soil open and mellow, for the ready admission of the roots of the plants; likewise, that when the grain is filling, the plants require the most nutriment; and that previously to this the soil is considerably consolidated by time, unless it has been kept open and mellow by the fermentation of the animal and vegetable matter contained in it, or consists principally of sand. In the latter case, the lack of animal and vegetable matters causes much injurious evaporation of moisture. This, if the season does not happen to be dripping, will be the case.

somest carcass? When I refer to the most certain tests, the London Price Currents, I find British Merino wool quoted at 1s. 6d. a 2s. per lb., and South-down the same; when Saxony (or pure Merino, as I should term it,) is quoted at 6s. 6d. a 8s. 6d. This simple fact speaks volumes in favour of maintaining the stock pure. Both Parry and Sebright, I believe, wrote in 1809. Are there not more recent publications on the subject?

"In a Norfolk paper about a year ago, it is stated that a distinguished botanist, Baron de Schank, of Trinidad, had arrived there, and was desirous of introducing the cultivation of a South American esculent called "Arracacha," yielding a food similar to the potato, but much less stultent—said to be extremely grateful to the stomach, and so easy of digestion that it is usual to give it to convalescents with weak stomachs; growing to the size and shape of a large cow's horn. I should be glad to hear if this root has been introduced and cultivated, and with what success.

I remain, dear sir, your most obed't.
W. J. MILLER."

INQUIRIES RESPECTING LUCERNE.

Kent county, Md.

The Editor of the American Farmer will confer a favour on the farmers of this county and promote the interests of agriculture, by publishing in his next paper all the information that he possesses concerning the culture, &c. of lucerne. The following points, particularly, should be noticed, viz:

The time of sowing; the preparation of the ground; the quantity of seed per acre. Whether it should be sown alone, or mixed with other grain or grasses; its comparative value in respect to timothy, clover, sain-foin, &c.; the kind of soil on which it thrives best; whether lucerne is more profitable as a hay or when used for soiling.

Our farmers, though still far behind their Pennsylvania neighbours, are becoming much more attentive to providing hay for the winter consumption of their stock than formerly. A few years ago, not one in a hundred, taking the county through, ever thought of making any provision beyond what the offal of their wheat and corn crops afforded. Very few still, think of having any green food for their cattle in summer beyond the scanty produce of their worn-out pastures. Having heard from a friend, (for I never saw it grow,) that lucerne is the best of all the grasses which thrive in our climate for summer use, I wish to introduce its culture in this county; and for this reason, will be greatly obliged by your compliance with the above request.

Editor Telegraph, Chestertown.

JOHN S. SKINNER, Esq.

Editor Am. Farm., Baltimore.

[Several publications have been made in previous volumes of the American Farmer, in regard to the culture of this valuable grass for soiling. We should esteem it an honour to have further suggestions from those who know the culture, and its usefulness for soiling.

SHEEP.

New York State.

It is well known that American and Saxony wool do not make cloth of so fine a texture as the French and Spanish. The French, Saxony and American sheep, are all originally from Spain, yet the French and Spanish wool will make cloth of finer texture, whilst that which is fabricated from the Saxony and American, is uniformly loose and spongy.

It is important to the wool grower, as well as the manufacturer; that this defect should be removed,

the cause. Having turned my attention to the subject, I submit the following as at least a probable theory, which may be easily tested by experiment.

As the animal from which we obtain fine wool has the same origin in all countries, it is a legitimate conclusion, that the cause is not in the wool, but in some difference in the preparation subsequent to the shearing. The Spanish and French wool is sorted as soon as the flocks are shorn; it is then scoured in hot water and packed; in this state it remains for six or twelve months before it is worked into cloth. The Saxons and Americans wash their sheep before shearing, and pack their wool with all its yolk and grease. It is said to be an established fact, that wool packed in its yolk and grease will continue to organize after it is so packed, and that for a considerable time—i. e. a given weight of wool packed in its yolk and grease without scouring, will be found to contain more wool after being so packed for six months, than if scoured when taken off the sheep's back. I apprehend that the wool formed after the fleece is taken from the living animal, is but imperfectly organized, that it is more greasy than genuine wool, and that in the process of fulling, instead of creeping into shorter lengths by the friction of the hammers, it has a tendency to slide over each other, making the ground of the cloth thick but not firm.

I do not consider this as an indubitable theory, yet I consider it so far reasonable as to deserve an experiment, which can easily be made by any of our large wool growers. I would recommend them at their next shearing season, to have a part of their fine wool sorted and scoured soon as shorn—let this be packed as soon as it is dry, and in four or six months afterwards put it in the hands of some skillful manufacturer to test the result.

HOPSON.

SHEEP.

(From the New York Statesman of March 28.)

OHIO AGAINST THE UNION.

We are happy to insert the following interesting challenge from one of the most extensive wool-growers in Ohio. It will, we hope, be the means of exciting a noble and useful competition. Such an exhibition as Mr. Dickinson proposes, could not fail of benefitting the agricultural interest, and advancing among us the manufacture of fine woollen cloths:

Steubenville, Ohio, March 20, 1826.

To the Editors of the Statesman.

GENTLEMEN,—I observe in your paper of the 21st ult. the following:

"Fine Wool.—We are informed that some of the principal manufacturers and wool-growers assembled at Washington during the present session, exhibited specimens of wool from various parts of the United States, and that a sample sent by Judge Pendleton, of Dutchess county, was pronounced to be the finest exhibited. It was of the Saxony breed."

I was the only woollen manufacturer and wool-grower, who attended at the late exhibition at the city of Washington, and I state with entire confidence that there were no samples of fine wool then presented for exhibition.

Some time in January, a member of Congress from New York, a gentleman of the first standing in the country,* wrote, to several of his friends, my particular desire, and procured from them specimens of their finest wool. They were given to me, without permitting me to enquire from whence or from whom they came, with the understanding that I would examine them carefully and report my opinion upon

* Reference is made to the name of the gentleman in the Statesman of the 21st ult.

each. I did so, and I take great pleasure in stating that they were indeed, all beautiful samples of fine merino wool, and the one which I preferred to the others, came, as I was afterwards told, from the flock of Judge Pendleton. Those samples were, however, exclusively from the state of New York; and this statement is not made with a view to disparage the flock of any gentleman, but simply to state the facts which occurred.

I entertain the belief that there are pure Merino sheep in Jefferson county, in the state of Ohio, as fine woolled, as can be found in the state of New-York, or indeed any other state in the Union: and in order to test the soundness of this opinion, I will exhibit, in June or July next, at Philadelphia, or Baltimore, fifty or one hundred fleeces, (washed or unwashed) from my own flock, to be compared with a corresponding number of fleeces from the flock of any other gentleman in the U. States, under the direction of an impartial committee, (from the Franklin Institute, if in Philadelphia,) whose duty it shall be to call in wool assorters, master workmen, to determine on the relative value and fine quality of the wool. The details, however, can be readily settled hereafter. I invite the owners of Saxony sheep particularly to this notice.

I have often thought that an exhibition of Merino Bucks, periodically, at some central point, in the U. States, (near Baltimore for instance,) would be attended with good consequences, and I mentioned the subject to J. S. Skinner, Esq., Editor of the American Farmer, who takes the deepest interest in all such matters. He seemed to think well of it, and appeared disposed to encourage it. It would certainly excite a very laudable emulation.

We presume that a fund might be made up by the parties, and that a silver cup might be awarded to the owner of the finest woolled ram—and one to the owner of the finest formed ram.

There is an opinion inculcated, that the Merino sheep have not good forms. This prejudice (and such it is,) would soon be done away, for I certainly have in my flock, ewes and rams, as perfectly formed, in all points, as can be found in any other description of sheep.

I am, respectfully, your obed't serv't,
W. R. DICKINSON.

SHEEP.

There are 3,196,529 sheep in the state of New York; and there are also nearly, if not quite as many in Pennsylvania. The whole number in the United States, is estimated at more than fifteen millions, and rapidly increasing.

RECENT SALE OF WOOL.

(Reported for the Daily American Statesman.)

By Coolidge, Poor & Head—under \$2000, 6 months; \$2000 and over, 6 and 9 months.

Wool, common	600 lbs. per lb.	25	a—
15-16 to full blood	500	"	33 a—
15-16 to full blood	400	"	36 a—
3-4 to 7-8	1200	"	28 a—
Lambs', unwashed	500	"	20 a—
7-8 to 15-16 blood	500	"	37 a—
All full	1120	"	26 a 41
Low grade	400	"	32 a—
Foreign	800	"	16 a—
3-4 blood	3600	"	36 a—
1-2 "	2500	"	33 a 35
Full bl. sel'd fleeces	5500	"	50 a 52½
" and high grade	1700	"	45½ a—
3-4 blood	4200	"	39 a 40½
" " in bags	10 bags	"	41 a—
Low gr. and com.	1300 lbs.	"	31 a—
Full bld., half Sax.	5500	"	53 a 69
High grade	1200	"	42 a—
½ to ¾ bld., cl. w'd.	1100	"	43 a—

Full bl. sel'd fleece	800	"	51 a—
½ to full bld. clean	1200	"	46 a—
Full bl., part Sax.	1800	"	65 a—
Clean wash'd, full			
bl., sel'd fleeces	1600	"	60 a—
Full bl., sup.	2000	"	67 a—
Full blood	4900	"	46 a 51½
Full bl., unopened	13 bags	"	46 a—
Lambs', unwashed			
unopened	5 bags	"	54 a—
2d qual. high grade,			
clean washed,	1000 lbs.	"	37 a—
½ to 15-16, cl. w'd.	1000	"	36 a—
1st qual. unw. Ohio	2600	"	24 a—
2d qual.	3000	"	21 a—
½ blood, cl. washed	1500	"	35 a—
2d qual. Merino	2400	"	37 a 38
High grade, New			
York, washed	1500	"	40 a—
" " " unopen'd	26 bags	"	40½ a—
¾ a ¾ blood, N. York			
washed	1500	"	39 a—
¾ a ¾ bl. N. Y. unop.	20 bags	"	37½ a—
¾ a ¾ bl. " washed	1350 lbs.	"	32 a—
¾ 58 bags, same			
Tertia Saxony	6 bales	"	63 a—
Secunda Saxony	13	"	68 a—
Second Prima	13	"	81 a—
First Prima	5	"	96 a—
Electoral	4	"	\$1.43 a 1.45
Spanish	43	"	26 a 31½
½ and ¾ blood	8	"	36 a—
High grade	800 lbs.	"	25 a—
½ and full blood	8461	"	46 a 47
¾ and full blood	6024	"	40 a—
Full blood	1780	"	44 a 46
Grade	800	"	33 a—
Full blood, ½ and ¾	12 bales	"	37 a—
Secunda Saxony	14	"	63 a 65
Spanish	6	"	41 a—
Smyrna, washed	20	"	20 a 22
Smyrna, unwash'd	20	"	12½ a—
Adrianople, wash'd	5	"	20 a—
Smyrna, 1st qual.	37	"	12½ a—
Smyrna, 2d qual.	5	"	9½ a—
Fine Sax. in fleeces	7	"	61 a 75
Segoviano, superior	6	"	73 a—
Spanish	9	"	42 a—
½ blood	1500 lbs.	"	35 a—
Merino	6 bales	"	41 a—
Grade and full blood	7	"	31 a—
Merino	10	"	37 a 42
Carpet wool	3	"	14 a—
Spinning, 2d qual.	2	"	18 a—
Black	2	"	22 a—
Lambs	2	"	42 a—
Full blood	15	"	35 a 45
Native grade	9	"	28 a—
1st quality spinning	5	"	36 a—
Smyrna unwashed	6	"	10 a—
Extra super Spanish	41	"	62 a 64
Super	5	"	41 a—
Merino	1115	"	35 a—
4400 lbs. wool		"	19 a 20

Besides the above, there was considerable more wool sold, but in small lots, and a quantity withdrawn.

POTATOES.

"It is really a great shame, and a serious grievance," said a person to me this morning, "to pay such an extravagant price for potatoes. I have just paid a dollar and seventy-five cents a bushel for two bushels of English potatoes." As may be readily imagined, I concurred in this opinion.

There are few things which puzzle me more than the refusal of our farmers to grow the things we want, and which would pay them well; and their persisting in growing the things which we do not

want, for which there is no adequate foreign market, and which consequently cannot, and does not, pay them, as well as potatoes, or flax, or hemp, or wool, all of which we could grow in abundance, and of all which we import largely, and pay high prices, because our farmers will not raise them, but will raise wheat and rye, &c. I have conversed on this subject with intelligent farmers from all parts of the State; and they all agree, that for five-and-twenty years, every year, on an average, potatoes have been the most profitable crop raised by our farmers, yet they do not grow them in sufficient abundance. They leave us dependant upon countries three thousand miles off, where an acre of land, rents, tythes and taxes, costs more, in one year, than would purchase, in fee simple, as much land of as good a quality, near our markets; I say they leave us dependant on those countries for our daily food, while their barns groan under the weight of their bread stuffs, for which they cannot find a profitable market.

This to me is inexplicable, and it is not made in the least more clear and intelligible, by a visit I lately had from a sensible, well educated, industrious farmer. To my great surprise, he told me that the duty on potatoes was not high enough, and that the farmers would not turn their attention to the raising of potatoes, until the government had prohibited their importation. As I live this is true! and, the man who said it, is such a man as I have represented him. Can it be possible—no, I will not believe it—that he is not in error? That nothing should be wanting to excite our special wonder, this gentleman, whose farm is within ten miles of Philadelphia, and who is well acquainted with English, as well as American farming, says he can work his farm here, at as little expense, for labour, as he could in England.

Will this gentleman himself, or will some other practical and intelligent farmer, do the country the service to put their thoughts to paper on the subject of growing potatoes. It is one of great importance. There is no root we so much undervalue. Pray, my good friends, give information as to the best mode of selecting the best seed—and of planting and bringing it to perfection. If you understand it, treat, also, of the best mode of cooking them, and of the various uses to which they may be applied.

Such a treatise would be of advantage to the country, and I should feel under obligations to any qualified persons who would write it. Those who have not time to embrace the whole subject, would do well to communicate such information as they may possess, in such manner as they may think best. I am also of opinion, that more flax, hemp and wool could be profitably grown in the United States. [Dem. Press.]

[The dryness of our summers is the great obstacle to the cultivation of this invaluable esculent, in the Southern states. Many people planted last year, and after every care in the preparation of the ground and the culture, did not gather as many as they planted.]

Through Commodore Chauncey, from Commodore Hull, we have lately received a box of the indigenous Irish potatoes of Peru. We have placed them in the hands of Mr. B. F. Mackall, of Cecil county, who will, if it can be done, derive valuable varieties from these original roots.—Ed. Am. Fam.]

ON THE CULTIVATION OF POTATOES.

(From the New England Farmer.)

Worcester county, Mass., 4th mo. 10, 1826.

There have been grievous complaints by the people of Boston, for a number of years, (and not without just cause,) of bad potatoes. I have noticed a number of scientific disquisitions upon the subject, but none that exactly accords with my

views. However incorrect I may be in my conclusions upon the subject, I may run but little risk in stating, what I think I have satisfactorily ascertained, to be the best method for me, on my land, for insuring good potatoes. About fifteen years since, I purchased some of the common blue potatoes for seed. The seller said the potatoes had heretofore been very good, but he thought they had lost their good quality, and that by changing them (as the phrase is,) they would do better. I was young and inexperienced, but I had no faith in this hypothesis. However, the potatoes were ill-shaped things, and, when cooked, as free from any farinaceous appearance as a pickled cucumber. I planted them on a piece of land that I was subduing, dunged them lightly with winter dung, which was spread and harrowed in. The crop was middling, and the potatoes for autumn and winter eating, tolerably good. The next season I manured the same land with winter dung, and ploughed it in; round, fair and middling sized potatoes only were selected from the previous year's growth, for seed; they were planted in the usual way, two in a hill; ploughed and hoed twice. The succeeding autumn they yielded a good crop of mostly round, fair and handsome potatoes, and for eating I never saw better. Their superior quality was noticed by all who ate of them. I now considered that these potatoes had regained their original good quality, and that it was effected by selecting the seed *only*—but it was an erroneous conclusion.

The third year the seed was selected as before; a part of the same field, ploughed and manured in the same way as the year before, was planted. Some of the selected seed was also planted in a field that had for a number of years been cultivated; here, several rows were dunged in the hill with fine mixed manure, and about as many with only a handful of plaster. In the fall I commenced digging successively of the three different plantings for table use. Those dunged in the hill, appearing nearest maturity, I began upon them first; I found their appearance different from those raised the year before; more long ones—some part eaten by worms, and others with small ones attached to them by narrow necks. They were cooked, but instead of being sound mealy potatoes, they were of an ordinary quality—some had hard balls in the middle and others hollow. I next dug some of those that were plastered; their appearance was better; less small ones, no effects of worms, but less in a hill—when cooked they were somewhat better than the others, but very inferior to the second year's crop. Here my scheme for the improvement of run-out potatoes was for a moment frustrated; however, the next trial was upon those in the new field. Here the hills afforded a good yield of round, fair and clear potatoes; when boiled they were about as good as the second year's growth—but nothing improved. I continued experiments, (always careful in the selection of seed,) and the fourth year ploughed and fenced with posts and rails, a piece of green sward in my pasture; harrowed in coarse dung, and had an excellent crop of the best of potatoes, (some of these I sold in Boston for 50 cents, when there were plenty in the market for 30 and 33 cents.) I also planted around a corn-field two rows; this field had been ploughed four years in succession—winter dung ploughed in, and fine mixed manure put to the hills; these potatoes yielded as well, and perhaps some more than those in the pasture, but they were more deformed and less farinaceous, and in the following year there was a great difference in the potatoes. I have observed that to raise good potatoes, something necessary is required, than the selection of the seed. Therefore, by myself, I adopted the following method, for conclusions

general observation and inquiry upon the subject. First, to select such potatoes, shape and size, as I wish to raise. Secondly, to plant them on new or green sward land, two, and not to exceed three years in succession. Thirdly, to use no other than winter dung (except the addition of plaster to the hills or vines,) for manure dressing, to spread this and mingle it with the soil; this being generally free of worms, and its decomposition will be about the time the roots of the potatoes need its nourishment. And fourthly, never to plant them on a wet or clayey soil. By observing these particulars, I have always had good potatoes; my blues I still keep, and I don't know that I could find better, notwithstanding some thought them run-out more than fifteen years ago. Whoever is disposed to adopt the above method and perform it, will no more be troubled with the disagreeable tang of rank and watery potatoes—and for what they have to spare, the citizens of Boston, I presume, will willingly pay them a good price. I am of the opinion that good potatoes for table use, are seldom produced from fields that have been long and highly cultivated. Perhaps some of the agriculturists near Boston may be induced to try the experiment, if it has not been particularly tried. I continue to plough small pieces in my pasture, when I have no green sward of a number of years' standing that I wish to turn up, and find my pasture benefitted by it. I will add no more to the subject this time, but submit the foregoing to the better judgment of experienced and practical farmers. D. S.

POTATOES.

(From the New England Farmer.)

Ryegate, Vt., April 21, 1826.

On the third of May, 1825, I selected twenty good handsome potatoes, as near of a size as possible, ten of which I planted whole in the hills; the other ten I cut into four pieces each, and planted in ten hills, in a parallel row with the other, four pieces in each hill. On the 28th day of September I dug the potatoes and weighed the produce of each row by itself. The row in which the ten whole potatoes were planted weighed 46 lbs. 12 oz., and the row that was cut into quarters, produced 77 lbs. 4 oz. The rows were contiguous to each other, and the soil exactly the same. No manure was used. J. W.

HINT FOR A ROTATION OF CROPS IN THE SOUTH.

1st year, Oats,	(5 acres to the hand.)
2d year, Cotton,	do. do. do.
3d year, Corn,	do. do. do.

METHOD.

"In July, when the oats are cut, turn in the stubble, &c. with a dagon. Sow about a bushel of cow peas to the acre, broad-cast and harrow them in with an iron-toothed harrow. Before frost turn in the green pea-vines with a dagon, and harrow the ground.

"The next year plant your cotton on the ground thus treated, manuring in the drill with your animal manure and straw, cotton stalks, corn stalks, &c. from your farm yard.

"The next year plant your corn on the land occupied the year before with cotton, and manure the hill or drill with cotton stalks, planting the step or space with peas for seed, &c.

"In this way go on; first with oats followed by a manuring of peas; second, with cotton, manured with animal manure, &c. and third, with corn and peas, manured with cotton-seed. Each year you will have in, five acres of oats, five of cotton, and five of corn. Perhaps fifteen acres of peas, and five of corn. The manure is not lost, and the soil is improved.

by using the plough more and the hoe less, that quantity can be easily managed, especially when deep ploughing with the dagon is used in turning in the peas, &c. by which both the difficulty as to grass is greatly diminished, and the cultivation of the corn and cotton with the shovel is rendered much lighter. J. J."

Newberry, April 21, 1826.

PROSPECT OF CROPS.

Extract of a letter to the Editor, dated Newberry, April 21, 1826.

"The Spring in this quarter has been unpropitious. It opened very early, and after thus persuading the planter to put in his crop of corn too soon, severe frosts set in, which, together with the greatest drought recollected at this season, have injured that crop greatly. Owing to the great drought, small-grain crops look very unpromising, particularly oats, which were late in putting in, owing to the severe and wet winter we had.

"This is now about the close of cotton planting with most of us, but the drought has prevented that which was early planted from coming up as it ought; and what does come up looks sickly. Unless rain and warm weather, especially warm nights, shall set in shortly, much is to be apprehended with regard to a good stand.

"Permit me to suggest, whether it would not be beneficial to the Agriculturists of the South, if a prize should be proposed for the best essay on the duties of overseers or managers, in the form of an address, to persons engaged in that employment. Every thing in the slave-holding states depends on their conduct; and until they shall be not only well instructed in their duties, in all their branches, even to the most minute details, but suitably impressed with a sense of their obligation to observe them faithfully, agriculture must languish amongst us."

Frederick county, Va. May 2, 1826.

"Our great staple, wheat, is uncommonly promising on this side of the ridge, as the Spring has been very favourable. No marks of the fly are yet to be seen, and I would prognosticate, though the ides of May have not yet passed with it, we shall mainly escape its ravages this Spring. Last season you were desirous of information about the New-York White Flint wheat, the experiment was too partially tried in this part of the country then to afford satisfactory information; this season will probably test its value. I should pronounce it productive, and possessing an astonishing property of throwing off the effects of injury by the fly. In October last a few acres of it, which came up well was assailed, and exhibited an appearance of speedy ruin—in the course of November its vigorous resistance bid fair to overcome the injury and long ere this its triumph has been complete, promising a great crop. It was the only wheat of three kinds seeded, that was at all injured last fall, and I attribute the circumstance to its contiguity to a rye lot which was seeded in August, and completely destroyed by the fly. This is not the first time I have suffered by sowing rye so very early—by this imprudent practice a succession of food is kept up for the fly."

RURAL ECONOMY.

MONGRE, B. L. S.

(From the New England Farmer.)

DEAR SIR,

Brighton, Jan. 3, 1826.

There are few persons who frequent the Boston market between the early part of autumn and spring, but must have noticed the exhibition of the fine fowl called Mongre geese, that are sold ready to double the price of common geese. And those who have not taken the trouble to visit the

tables of the *Bostonians*, or on their own, must be satisfied that, comparatively, they are not overrated—even from the extra quantity of meat on their carcass, besides its superior delicacy and flavour. The expense of keeping them, especially if they have an extensive range and access to ponds or running water, is less than for the common kind, as they grow faster with less feeding; and it is said they are more hardy and fatten easier. But being the offspring of wild and tame geese, their multiplication is much more difficult.

The wild goose of our country is a species peculiar to North America—none having been seen in Europe, until they were introduced as a *natural curiosity*, from Canada, at an early period of the settlement of that country; and hence obtained the name of *Anas Canadensis*, by which they have since been known and described by naturalists. A few of the numerous flocks that pass over us are known to breed in high northern latitudes; but by far the greater portion pass Hudson's bay, pursuing their course still further towards the pole, and enjoy the summer in regions hitherto unexplored by man, doubtless as delightful to them as those in the same quarter are in the imagination of the ingenious gentleman at the west, whose *theory* seems to attract attention.

The Supreme Author of nature, who invariably proportions means to ends, has formed *this* species with *habits* suited to their condition; for they have no propensity to breed until three or four years old; otherwise, being enfeebled during the process of incubation, and by guarding and searching after food for their young, they would not have sufficient strength at an earlier age to endure the fatigue of an indispensable flight of two or three thousand miles; and as the season is *strictly* limited in which they have to breed and prepare their young for so long a journey, they lay but few eggs—never exceeding seven. Being of a distinct species from the domestic goose, their mongrel progeny are *hybrids* or *mules*, and do not breed; although, when two or three years old, they will make *nests* and lay eggs, but there has been no instance of one ever being hatched. They are of course killed the first year, and have the valuable property of retaining their excellence for the table in the spring, when the common domestic kind are worthless.

Having lately had occasion to investigate the habits of this race, for the purpose of illustrating *facts* connected with another subject of natural history, my inquiries were directed to several intelligent persons who had been accustomed to rearing them, and particularly a respectable farmer, of undoubted veracity, in a neighbouring state, who has been extensively engaged in the business for a number of years; and whose system of management, as far as I can learn, is not practised in this part of the country; by pursuing which these valuable fowl can be so multiplied that it may be deemed worthy of being made known. The method generally practised is to mate a *wild gander* with a *tame goose*, but he will attach himself but to *one*, nor will she breed by him until he is three or four years old. As wild ganders are scarce, the system adopted by my informant is, to induce him to attach himself to a number of tame geese. For which purpose he first mates him with a *wild goose*; and when she is ready to sit, takes away all her eggs and puts under her as many as she can cover of those laid by a tame goose mated with a tame gander. When hatched, the young will have all the attention paid them by their foster parents as if they had been *legitimate*; but there must be no mixture of eggs, for should one of the *wild* species be hatched, the deception will be discovered and the tame goslings instantly dispatched or abandoned. When they are so far grown that the young ganders can be easily distinguished, they should be *separated*, and the wild geese also. The wild gander, still feeling assured

of the legitimacy of the remainder, will guard them most scrupulously, become attached, and mate with each the next year; when all the geese of the brood will produce mongrels by him, and for many years after. I apprehend the same result may be effected when a wild gander is mated with a *tame* goose, by removing the *mongrel* eggs and pursuing a similar course. By one or both of these methods, I think it may be fairly assumed that the number of *mongrels* by each wild gander will be at least quadrupled. And as *plenty*, especially of good things, always *increases consumption*, there will be no danger of spoiling the market.

The subject may appear too diminutive to be introduced into the important field of rural economy, in which you are labouring with such laudable zeal and perseverance, but I trust you are fully aware, that it is the *small rills which produce the stream that, properly directed, makes the mill go*.

I remain, most cordially yours,

S. W. POMEROY.

CIDER BARRELS.

Middlesex county, April 18, 1826.

A cheap way to keep cider barrels sweet, is as follows. Take the barrels soon after the cider is out, and drain off the lees (if the cask has been kept full while the cider was working there will be but a trifle,) bung them tight, and put them in some suitable place. Previous to using them for cider the ensuing season, rinse them. I have practised the above method for more than twenty years, and never had any cask which did not keep perfectly sweet. Rinsing casks with cold water, and not keeping them bunged tight, I believe is the principal cause of so many cider casks becoming foul and musty.

[J. E. Farn.]

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

A WHISPER TO THE WIFE.

[Continued from p. 54.]

Chapter IX.

ON THE MANAGEMENT AND EDUCATION OF CHILDREN.

The great Dr. Buchan says, "The first thing to be given to a child after it is born, is the breast; and, on no account, syrups, castor oil, or medicine. A woman's suck is nature's provision for the infant; no art can afford a substitute: deprived of it, the infant generally perishes. In the period of infancy," he adds, "the foundation of a good or a bad constitution is generally laid: and a mother who relinquishes her child to the care of hirelings, hardly deserves the name of mother. A child, by being brought up under its mother's eye, not only secures her affection, but may reap all the advantages of a parent's care, even though it be suckled by another. How can she be better employed than in superintending her nursery? It is her province not only to form the body, but also to give the mind a right bias. Be assured, a mother generally has it in her power to make him either healthy or feeble, either useful in life, or the pest of society. Search nature throughout, and we cannot find a parallel to a mother resigning to a proxy the nursing of her child! Every other animal is the nurse of its own offspring. However, should the state of her health oblige her to employ another in this office, let it be done under her own eye. If there be plenty of suck, the child will require no other food for three or four months; but after this time, give it once or twice a day milk-and-water pap, light broth with bread in it, with such like; and keep a crust of bread constantly in its hand: it promotes the cutting of teeth, and affords excellent nourishment where allowed. Let it be fed

four or five times a day, but not oftener; and on no account sweeten the food: it weakens the stomach, and makes the child eat more than is right. No butter, nor spoonfuls of wine or punch, but every thing light and simple. Keep them as much as possible in the open air, danced, and animated, and talked to, not kept mopingly nor stupidly in the nurse's arms. Put them early to the use of their limbs, leading them about by the hand. When they cry, endeavour to discover, that you may remedy, the cause. When they get ill, apply at once for medical skill. Let the nursery be the largest and best aired room in the house. No cradles nor rocking, and let the child sleep quite cool. Plunge them every morning into cold water, not giving more than one immersion; and dry them quickly. What a lovely object," says the same writer, "is a little baby just emerged from the cold water! After he has been dressed, his head resting on his mother's bosom, closing his pretty eyes to sleep with all the sweet calm of a cherub; his frame braced and vigorous; his little hands spread open with health; and his countenance blooming, placid, and lovely!"

The cries of infants are constantly excited by causes concealed from our observation. They are handled too roughly; or something is rubbing against their tender skin; or they are snatched up suddenly, and their arms hurt; or a pin perhaps in the clothes of the servant who carries them may have scratched them. Their little feet or hands may pain them with cold; they may be hungry or sleepy; perhaps sick or in pain; and, at all events, their cry should be always attended to.

The temper of a baby should be kept as placid and serene as possible: every thing that frets and tantalizes him should be carefully avoided. Indeed, his cries might be constantly prevented by not letting him see things improper for him to have. But if chance throws them in his way, on no account comply *merely* because he has cried for them. Even at this early age discipline must commence: his will must be subdued; and when he is old enough to walk and talk, the trouble both to himself and his mamma will be considerably lessened. Give me leave to ask a mother, Would she not correct her child for passion or self-will at a more advanced age? Then why permit it in an infant? Why not nip it at once in the bud, before time and habit have strengthened it?

If you indulge a child with what he cries for, of course the next time he wants to gain his will, he naturally employs the clamour and screaming which he has hitherto found so successful.

In a fit of passion, a baby flings himself back in the nurse's arms, screams, kicks, and lifts up his little hand to strike her. Every one—the mother as well as all present perhaps—laughs. A prophetic spirit would probably whisper her rather to mourn, could she see the future effects which time would give to this passion in the enraged Lilliputian.—"O dear, what harm could his baby hand do?" Not the least; but he exerted it to the utmost; and if the power of infant Hercules had been his, his nurse would have suffered in proportion. If something improper for him to have been taken from him; or he wants to go out; or some matter or other occurs which crosses his will: instantly endeavour to change the tone of his little mind; run with him to a window, point out to him the trees, the birds, the shrubs—any object which the landscape presents; shew him some pretty trinket or toy. But as you value his future temper and happiness, indulge him not in the object which had excited his passion. Be assured, that every time an evil temper is indulged, from the moment when, at five or six months old, it begins to dawn in the infant breast, additional strength is added to it. And the mother who suffers her baby to scream and to fling his food in passion about the floor, without shewing by her looks and tone of voice evident marks of displeasure, may

herself an affectionate mother; but I call her a weak, silly woman, wholly unacquainted with human nature.

Something or other should as constantly as possible be kept in a baby's hand; such as a stick of sealing wax, coral and bells, &c. It gives the little mind something on which to exercise itself, and rescues it from stupid inanity; and the eagerness with which the baby seizes and plays with those things is often most injudiciously checked by ill humour or carelessness in the attendant; and the pretty babe is thus unnecessarily irritated and set to crying. Be assured, a baby's temper is much injured by the peevishness and ill-timed interference of the maid who carries it on her arm.

Never give an infant an article in play that requires watching; the attendant may forget to watch, and an accident may probably ensue.

When an infant is playing with something improper for it to have, its attendant will sometimes snatch away the article, and set the baby a-screaming. This is unkind, as well as injudicious: let a substitute, equally amusing, be provided; and with a little management the exchange may be made without diminishing the smiles of the pretty babe. Sometimes a little puppy or kitten is given up for the amusement of an infant. There is a great degree of cruelty in this: independent of the claws of the kitten rendering it an improper object to be played with, the infant is continually, though unconsciously, inflicting torture on the helpless victim.

When an infant stretches forth its hand to grasp what is not proper for it to have, at once express by your looks your disapprobation. Words it cannot understand; but it well understands the tone of voice, and the expression of the countenance. Let any one who doubts this, look at an infant standing in his mother's lap, and gazing in her face: if she shake her head and frown, will he not lower his under lip, and whimper? if she laughs, immediately he laughs also; and if she looks sad and grieved, anxiety and sorrow steal over his baby face; and I have frequently seen the sweet cherub take up his little frock to dry his mother's tears. All this proves how capable an infant is of understanding your disapprobation.

With the first dawn of reason, a mother should commence the discipline of her child. To subdue his will, to correct all fretfulness and impatience, and to indulge him in nothing that he passionately cries for, should be her most earnest effort. And let her remember, that this discipline is perfectly consistent with the tenderest and most affectionate kindness.

"Discipline may be begun much sooner than it is generally supposed. The sympathies even of infants are quick, and powerfully affected by the manner, look, and tone of the voice of those about them. Something therefore may undoubtedly be done towards influencing the mind in the first two or three years of infancy; and it is inexcusable in a mother to neglect such a very important matter.

Can the beauty of truth, or the deformity of falsehood, be impressed on the mind of so young a child? Yes, truly! in a great degree it can. I have seen a pretty baby just beginning to speak, trotting about the garden; and on being asked, "Who broke that ine geranium?" his answer was, "The little bee, mamma." A sensible person might have said, "Alas! sweet child, why are the first accents which pass those ruby lips allowed to be polluted by falsehood?"

Many persons who allow themselves to treat children during their earliest years, merely as playthings, humouring their caprices, and sacrificing to their whimsies their future welfare; when the charm of novelty is past, commence a system of restraint and severity, and display displeasure and irritability at the very defects of which they themselves have laid the foundation. "Then," they say, "it is too late to state the stream of error." But the foundation is laid, and the stream is running.

I shall now for the present take leave of my interesting baby boy; but for his future improvement, perhaps I may soon present his mamma with a small volume of selections from the best authors on the important work of education.

(To be concluded in our next.)

MISCELLANEOUS.

AGRICULTURAL MACHINES AND IMPLEMENTS.

Catalogue of Improved Agricultural Machines and Implements, for sale, and made to order, at the New York Agricultural Repository—By William Torrey, jun.

"He that tilleth his ground, shall have plenty of bread."

Solomon.

(Concluded from p. 56. Am. Farmer.)

HARROWS.

Hinge Harrows, \$20 to \$25.

Diamond do.

Expanding do. \$8 to \$12.

Common do. \$7 to \$15.

Of these, the Hinge are the best, if the ground is not perfectly smooth, as they accommodate themselves to the inequalities of the ground. The Diamond is also approved of. A part of the above have teeth fastened on with screws at top and a shoulder beneath, which renders the harrow very stiff and strong. The teeth can also be taken off without damage, to be repaired.

HAY MAKER,

With revolving rakes, considered as a very valuable machine. It is drawn by one horse. Twelve acres of hay may be cured in a day with it. Price \$60.

LACTOMETER,

For testing the quality of milk. A very small and cheap, but deservedly esteemed article. By it, the quality of milk, the comparative value of various sorts of food, and the excellence of different breeds of cows, are conclusively settled. No farmer who regards his success in obtaining a good breed of cows, or in feeding, will be without a Lactometer. Price 75 cents.

PLOUGHS.

Wilkie's.—A Scotch swing two-horse Plough, an improvement on Small's, is of very light draught, and with an experienced Ploughman, does its work better than any plough ever invented. It is well calculated for sward ploughing, but does not perform as well in rough land as the American Ploughs. Shares of wrought iron laid with Steel. Price \$18.

Freeborn's or Wood's.—These Ploughs are in such general use that a description is hardly necessary. They answer well for the common purpose of farmers, and are also the cheapest Ploughs used, provided, strength, durability, and low price are considered. The Shares are of cast iron, fastened to the mould-boards with screw-bolts, can be renewed with little trouble, and at a small expense.

Sorts, Corn, Seed, 0, 14 2, 3. \$5 to 10.

Note. Purchasers of this and all kinds of cast-iron Ploughs, can be supplied with Shares, &c. by addressing a letter to the Proprietor, stating the denomination of the Plough, and also the No. on the mould-board.

Hitchcock's.—An improvement or alteration of Freeborn's, cheap, and answers tolerably well except in rough land. Standard of cast-iron.

Sorts, 21, 22, 23, 24, 25. Prices \$4 to \$7.

Stevens's.—A Plough of very easy draft, considered much more than any other cast standard Plough in use. Sorts,

Peacock's.

Time and

expensive, the shares being wrought, and consequently requiring the aid of a Blacksmith to repair. Prices \$7 to \$12.

Dagon or Connecticut.—This Plough is not worthy to compete with those of a subsequent invention; it is "expensive in the frequent repairs it requires, too small and light to do work in the first style, especially in stiff or stony land. It is, however, considered efficient as a cultivator."—[*Danversfield's Address*, 1821.

There are also in use a great number of Ploughs bearing the names of their various projectors, but which do not differ essentially either in form or price from those stated.

A great saving of freight and inland transportation is obtained, by having the Ploughs taken apart and the iron work packed in barrels.

Double Mould Board.—Used advantageously in cultivating turnips and potatoes. It turns the furrow on each side; will answer well for any crops sown in rows or drills. It is also considered highly useful in the sandy light soils of the south. Prices \$7 and \$8.

SKIM COULTER.

Ducket's.—With this Coulter in ploughing sward the grass and weeds are turned down at the first operation, and then covered with fresh earth or mould from beneath. It is also used to turn in long manure, which is covered in the same manner. It is considered inapplicable to swing Ploughs.—[See *Dickson's Agriculture*, Vol. 1. *Complete Farmer*, Vol. 2. *American Farmer*, Vol. 4.

POST AUGERS.

Hoxie's.—For boring post holes, suitable of course only in land not stony. A hole can be made by one man in one quarter of the time required with the spade, and the ground encircling the post, is left in its originally hard state. Sorts, 6, 9, 12, 15 inches. Prices \$4 to \$6.

ROLLERS.

Field Rollers.—Are considered indispensable in English husbandry. They effectually smooth land intended for mowing, and are used advantageously after sowing seed. They require two horses or a yoke of oxen. Price \$30.

Garden Rollers.—For gravel walks, made of cast iron. Too well known to need description. Price \$20.

THRESHING MACHINES.

English Friction Machine.

Scotch do.

American do. various forms.

A great number of machines have been lately patented; they are all, however, imitations of the two first named. Those to be worked by hand, have almost entirely failed, requiring too great power. The above machines are simple, and not very expensive, if a horse or water power is possessed by the purchaser. A water power is by far the best. In England they are in general use, and it is common for persons to travel with portable machines. The advantages of using them, are, the quickness with which the work is done, enabling the farmer to be earlier in market with his grain, and preventing the great loss by keeping it in sheaf; and also the saving, by clean threshing. It is better to give 10 per cent. to have grain threshed by the machine, than to have it done for nothing in the common way. When, however, Threshing Machines are used, the straw cannot be kept in a marketable state, which is often an objection to their use near large cities.

N. B. The above machines are not kept on hand, but made to order. Therefore when wanted, a few weeks notice must necessarily be given.

In addition to those mentioned, the following are also kept on hand: Wheel-barrows, Weighing Machines for cattle and merchandise, Stuffed Hames for harness, and much more.

Cast Steel and Common Hoes, Iron and Wooden Rakes, Steel Hay and Dung Forks, Ox Chains, Plough Traces, Shovels, Spades, Ox Yokes, Bush Hooks, Rock Sledges, Pick Axes, Whistle Trees, Dynamometers for testing the draft of Ploughs, Spuds, Weeding Hooks, Garden Shears, Reels, Pruning Shears and Knives, &c. &c. &c.

SEEDS.

Shakers' and other Field and Garden Seeds, warranted fresh and genuine. The assortment of Seeds is small, but will be enlarged as speedily as circumstances will admit.

SPORTING OLIO.



NEW MARKET RACES.

First Day.

Tuesday, 2d May, the sweepstake for three years old, one mile heats, was contended for by four nags, viz: Mr. West's filly, Mr. Johnson's colt, Mr. Harrison's colt, and Mr. Wynn's filly; and taken by the first named at three heats, the first mile pronounced by the Judges a *dead heat*.

Second Day.

May 3d, the Proprietor's Purse, \$300, three mile heats, was run for—four started, and won at four heats by Mr. Johnson's Betsey Richards, beating Mr. Watson's Tyro, Mr. Winn's Mare, and Mr. West's Shawnee. The heats were divided as follows: Tyro took the first; Betsey the second; Mr. Winn's Mare the third; and Betsey the fourth. Tyro and Shawnee were distanced the third heat.

Third Day.

May 4th, the Jockey Club Purse of \$700, was taken by Mr. Theo. Field's horse Gohanna, beating Mr. Wm. Wynn's mare Flirtilla, and Mr. W. R. Johnson's horse Shakspeare.

PERFORMANCES OF JANUS ON THE TURF.

The spring he was three years old he was trained and ran in a sweepstakes at Lawrenceville, (Brunswick court-house,) mile heats; which race he won at three heats; three started—Mr. Field's mare Phillis, and Capt. Harrison's filly.

The autumn that he was three, he was trained and run at Jeter's, in Nottaway, mile heats, the best three in five.* In that race there were three started—Sir Henry, Mr. Hare's mare Rosette, and Janus. The first and second heat Janus won, and was beaten the third by Sir Henry 18 inches; the fourth heat Janus did not contend for, and was beaten the fifth by Henry about clear. After that race he went on to Tree Hill, (Richmond,) and run in a sweepstake two mile heats, which race he won with great ease at two heats, beating Mr. Harrison's Burst-all and Mr. Selden's filly.

The same autumn he won the jockey club purse at Spring Hill, two mile heats; four started; which race he won with ease.

The spring he was four, he run at Lawrenceville two mile heats; four started; Janus won the first heat, and was beaten the second, not far. In this race there were four heats, and Janus contended for every heat, and was not beaten much the last heat by *Aratus*—only two or three feet.

He went on from thence to New Market (Peters-

burg,) and run three mile heats, and was beaten by Nancy Warren.

The autumn that he was four, he ran at New Market three mile heats, against Betsey Robertson and Bertrand, which race Betsey Robertson won. In that race Janus got lame, and has not been trained since. In fact he started a lame horse; he fell lame on his travel from Tree Hill, where he had the honour to contribute to the entertainment of General Lafayette, during his master's absence abroad.

Extract of a letter from Edmund Morgan, overseer at Roanoke, to J. R. of R., dated March 17, 1826.

"MR. RANDOLPH,

Sir,—Agreeably to your request, Mr. Benjamin Morton came and saw all your colts and fillies; and he thinks that the bay filly by Roanoke, No. 46, is worth more money than the chestnut mare by Sir Archy, No. 37, both out of Grand Duchess. He thinks them to be the best foals, altogether, that he ever saw got by one horse."

THE FARMER.

BALTIMORE, FRIDAY, MAY 12, 1826.

It will be remembered that the next meeting of the Trustees of the Maryland Agricultural Society, will be held next Thursday, at Waverly.

All persons intending to offer valuable animals for sale at the Maryland Cattle Show, are informed that they may advertise them, *gratis*, in the American Farmer, and that the sale will be made of any expense to the owners.

The Cattle Show will afford, on the first and second days of June, an excellent opportunity for selling valuable animals of all sorts.

To any one who has reflected upon the subject, it must always have been a matter of surprise that almost all the fine saddle, and yet more especially, the well-matched carriage horses, used in this state, should be purchased from others. Such want of enterprise and common apprehension of what is practicable and profitable, in the very line of their business, is absolutely disreputable to the landholders of the state. The case would be different if there were not a great number of horses reared within the state, because then it might be inferred that the omission to rear our own horses was the result of sound calculation; that it was dictated by the conviction, that being convenient for the transportation of hay, grain, &c. to market, it was better to rely altogether upon selling produce and buying horses. But the fact is known to be otherwise: there are annually a great number bred in the state; but they are of the most inferior blood, and in all respects of the vilest qualities: hence it is, that for good hacks, and for parade, coach and stage horses, immense sums of money are annually drawn from, instead of coming into the pockets of the citizens of Maryland. Now we hold that every farmer should abstain from rearing a horse at all, from a well-grounded conviction that it is more economical to buy, or, being convinced, as we are persuaded it must be, that it is cheaper to rear his own, he ought to be ashamed to use a horse of another's breeding, as well as of using an indifferent animal. We believe it must be far more economical to rear them, because we are satisfied that whatever may appear to be the expense of it, on paper and in the abstract, in point of fact and practice very little money is realized for that on which a fine horse might be reared on almost every farmer's estate. Let every one then set about rearing horses

for his own use at least, and if each will begin and continue to breed from the very best stock within his reach and means, it is easy to imagine that prodigious improvement would soon result from the general effort, and our State would soon become as celebrated as New-Jersey or any other State for the number, beauty, speed and fine action of her horses. Suppose, then, the mass of our farmers to be inspired with the resolution to pursue the course we have suggested, the question arises—how is it to be most speedily and effectually accomplished? We answer, let every owner of a mare, whatever may be her qualities, if she is deemed worthy of being put to any horse, let her go to none but THOROUGH BRED horses, of the best stock, if to be found within any reasonable distance. The wind, the muscle, the spirit, the longevity, of the English blood horse, is essential in all attempts to improve the existing vulgar, thick winded, clumsy "Jadish" race. A single cross by any mare will give half blood, and almost every colt by a mare of good size would be good for saddle or harness; the very fact of having a foal by a thorough-bred horse, will induce more care and attention, and short experience in the advantage of the blood will beget an universal assurance of its superiority and value.

How then is access to be had to this invaluable stock of the English thorough-bred four mile horse? There are already some in the State, and if those who can afford would go to Virginia and purchase some blooded mares, it would not be long before every county in the State would have an ample supply of thorough-bred stallions. Every colt of such a mare, if well kept, would probably fetch, at four years old, not less than \$300; and if farmers would learn that in which there is no mystery, to keep their full blooded colts for the turf, they might have them tried for a trifling expense, and without waging; and in all cases where they were proved to possess great speed and bottom, a much higher price might be obtained; from \$1500 to \$3000 is not an uncommon price to be given in New York and in the Southern States for tried horses.

It is known that the Hon. John Randolph, of Roanoke, has the largest stud of the best bred horses at this day, belonging to any gentleman in any country. He appears to have increased their numbers and preserved their blood in the greatest purity, rather as an amateur delighting to rear and cherish the noblest animal in his highest perfection, than with any view to sale, and beyond any demand for his own use. "*Gaudet equis canibusque.*" There are a few for which, owing to his partiality for the animal, or its family, he will take no price; against those which he is willing to dispose of, he fixes a price in his books, and nobody ever presumes to chaffer with him on the subject; that price is very reasonable, being, we believe, for his fillies, from 3 to 400 dollars; and here then a resource is open to those who wish to possess the pure blood of the finest horses recorded in the annals of the turf. For a list of these, the reader is referred to the American Farmer, vol. 6, page 20, and vol. 7, page 399.

An additional value of no small amount, is stamped upon Mr. Randolph's horses, by the unquestionable authenticity of their pedigrees: a claim which must be denied to many that pass for blooded horses.

Mark Anthony, a "capital son of Sir Archy," who is now covering at a very advanced age in North Carolina, at \$75, stands this season on the farm of Col. S. Ridgely, late Martin's, near Ellicott's Mills. We understand from all who have seen him, that he is a beautiful horse, from which the best stock may be derived. Rinaldo, another capital son of Sir Archy, bred by Mr. Randolph, and now at Roanoke, will be in the possession of the Editor of the American Farmer by the 20th of this month, and will probably stand at some point out of the way of interfering with Mark Anthony, for a number of

* Extract from a Respectable Virginia Planter.—"I think there were three heats run in one minute fifty-one seconds, and the longest one, fifty-four, Janus losing the race only by 2 or 3 feet."

mares not exceeding fifty, on terms so moderate as to leave no excuse to farmers within reasonable distance, for not availing themselves of the opportunity to profit by the blood of one of the strongest and best bred horses ever offered to the use of the Maryland publick. Of Rinaldo, 5 years old this grass, Mr. Randolph says, "he is a horse of great power and strength from his shoulders or neck rather back as I ever saw—equal to Roanoke, or to his sire, Sir Archy, but finer, because he has not the faults in Archy's symmetry."

"Rinaldo, (he adds) is a fine bay—better legs and feet no horse ever stood upon; and many who have seen him, (good judges too) prefer him from the girth back, even to Roanoke. Nothing can surpass him and Janus in their coupling and quarters. Janus, if any thing, a very little lower than Rinaldo, but both are high enough for any purpose that horse ever was put to."

M. Anthony & Rinaldo will be exhibited at the Maryland Cattle Show, on the first day of June, and Rinaldo will then be stationed, probably on the York or Reister's-Town road, to cover mares at \$ to be paid invariably, and without respect to persons, at the time of service; and the horse being young the number of mares will be limited, as before stated.

§7-A GOOD GOER.—The Editor saw the Washington mail delivered in Baltimore at 5 o'clock, and with his own blooded horse Champion, in harness, went to the General Post Office and paid his respects to the Postmaster General at 9 o'clock of the same morning. Leaving there some mornings after, at 5 o'clock, the same horse, without a blow or a word, and without distress, brought him back to breakfast with his family at 9 o'clock. The distance from one office to the other is little (if any) short of 40 miles. If time be money, to an industrious man, this shews the economy of a blooded horse, with foot and wind.

§7-MEASUREMENT OF A COW'S UDDER.—A few days since, in the presence of the President of the Bank of Baltimore and several other gentlemen, the udder of Mr. H. Thompson's dun cow, which some years since took the first premium, measured around the centre horizontally 5 feet 2 inches. From the top of the udder behind the string stretched along the surface of the udder behind the teats, to the top in front, measured 3 ft. 10 inches; from the point of one of her front teats to the point of the other, was 14 inches. The milk was dripping from every teat, and the cow calved that night.

§7-The approach of the season for planting Irish Potatoes, and the probability that the very high price at which they have been selling, will induce many to turn their attention more particularly to this crop, has induced us to appropriate several columns of this number to the subject.

§7-From good authority, the Editor has just understood, in Washington, that the estimate for the Chesapeake and Ohio Canal will be about \$2,000,000; \$800,000 to the purchase of the mountain, about 1,000,000 for the construction, and 4,000,000 for the purchase of the land. There must be a sum of 10,000,000 to complete the work. The canal will be 18 miles in length, with 10 locks, and 100 miles of rail road.

A. Lawrence offered the South Downs and Lincolnshire Sheep, imported by them last autumn. These animals, very fine ones of the kind, were sold at prices which would pay the owners very little more than the expense of their keeping since they arrived in the country. A specimen of the wool from one of the Lincolnshire breed, was exhibited, which was at least six inches long, and of a beautiful fineness. There were six animals of this kind, which were sold at \$20 to \$28; the South Downs, seven in number, brought \$11 to 37. The whole were selected from the best flocks in England.—*Boston paper.*

The sale of Saxony Sheep the last year, imported by Messrs. Searle, being 81 Rams, 57 Ewes, 12 Ram and 17 Ewe Lambs, amounted to \$26,518.75, averaging for each sheep and lamb \$152.80. The sheep and lambs sold this year, as above, being 321 sheep and 58 lambs, amounts to \$16,647, averaging for each sheep and lamb about \$44. (ib.)

Long Wool and South Down Sheep—imported by A. & A. Lawrence, in October.

Purchaser.	No.	kind.	price.
Mr. Watson,	1	S. Down Ram	\$11
"	2	"	13
"	3 and 4	"	21
"	5	So. Down Ewe,	37
"	6	do. Ram Lamb	17
Mr. Oakley,	7	So. Down Ram	22
" Williams,	8	Leicestershire do.	20
" Oakley,	9	Lincolnshire do.	27
" Williams,	10 and 11	" Ewes	28
"	12 and 13	" "	28

[The number was too large to be sold well, at one time and place. The owners, who have rendered a service to the country, would have done better to have divided and sold them at different places. It is very desirable that the show of sheep at our next exhibition should be more extensive than heretofore. Will any of the owners of Saxony Sheep accept the invitation of Mr. Dickinson, of Ohio, to shew them against Merinos of his own breeding.]

JACK FOR SALE.

The subscriber offers for sale the high bred Jack COLUMELLA. His dam is of the Andalusian breed, and the largest Spanish Jennet in the country. His sire, the noted Jack Barbarossa, now owned by Gen. Williams, of Stonington, Conn., who will realize \$600, for his services the last season.

COLUMELLA is three-quarters of Spanish blood and one-quarter Maltese, a proper cross to unite vigor and spirit with sufficient bone; is two years old, and gives promise to be equal, if not superior in size and other valuable properties, to any Jack ever bred in the United States. S. W. POMEROY.

Brighton, April 21, 1826.

SAXONY SHEEP.

A small choice lot of Saxony Sheep, consisting of eleven prime Bucks, thirty-five Ewes, and three Lambs, lately imported from Germany, and selected from the best flocks in that country, will be sold at Public Auction on Wednesday, 24th instant, at 12 o'clock, at noon of that day, at the Durham Ox Tavern, in Hamilton Village, near the seat of John Hare Powell, esq. where they can in the mean time be seen; offering to Agriculturists in this part of our country, an opportunity of acquiring a species of Wool in great demand in our manufactories. J. & W. LIPPINCOTT & Co. Philadelphia, May 9. Auctioneers.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8	12		
BACON, and Hams, . .	lb.	5	7 1/2	9	12
BEEF-WAX, Am. yellow	—	33			50
COFFEE, Java,	—	17	18	22	25
Havana,	—	18		18	20
COTTON, Louisiana, &c.	—	14	15		
Georgia Upland, . . .	—	12	12 1/2		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent each number to No. 18.	—				
CANDLES, Mould, . .	—	12	14	16	18
Dipt,	—	11			12 1/2
CHEESE,	—	8	10	12	15
FEATHERS, Live, . . .	—	31	32	37	
FISH, Herrings, Sus.	bbl.	2 50			
Shad, trimmed, . . .	—	7 00			
FLAXSEED, Rough, . .	oush	75		87 1/2	
FLOUR, Superfine, city,	bbl.	4 12		5 00	6 00
Fine,	—	4	4 50		
Susquehanna, superfi.	—	4 12		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	70	73		
Wheat, Family Flour, .	—	87	90		
do. Lawler,	—	50	70		
do. Red,	—	83	85		
Rye,	—	62	66		
Barley,	—	80			
Clover Seed, Red . . .	bush	3 87 1/2	4 25	4 75	
Ruta Baga Seed, . . .	lb.	1		2 00	
Orchard Grass Seed, .	bush	1 75		1 50	
Mangel Wurtzel Seed, .	—	1 25		3 00	
Timothy Seed,	—	2 25		40	50
Oats,	—	40	42		
Beans, White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	24		37	
HOGS' LARD,	—	7	8		
LEAD, Pig	lb.	6 1/2			
Bar	—	8	8 1/2		
LEATHER, Soal, best, .	—	23	24		
MOLASSES, sugar-house	gal.	45		62 1/2	75
Havana, 1st qual. . .	—	28	28 1/2	37 1/2	
NAILS, 6x20d.	lb.	6 1/2		9	
NAVAL STORES, Tar, .	bbl.	1 25			
Pitch,	—	2 25			
Turpentine, Soft, . .	—	1 50			
OIL, Whale, common, .	gal.	30	31	40	
Spermaceti, winter .	—	65		88	
PORK, Baltimore Mess,	bbl	11 00	12 00		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	4 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5 1/2	7 1/2	8	12
WHISKEY, 1st proof, .	gal.	29 1/2	30	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	36		50	
SUGARS, Havana White,	c.lb.	13 50		15	16
do. Brown,	—	9 00	9 50		
Louisiana,	—	7 75	9 00	10	11
Loaf,	lb.	19	22	20	2
SPICES, Cloves, . . .	—	70	75	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes,	bush	43		75	
Liverpool Blown . . .	—	45			
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, J. P.	gal.	50		3 50	
do. Sicily,	—	70		2 00	
Lisbon,	—			1 50	
Claret,	doz.			5 00	
do. at quality,	gal.	10			
do. Merino, full . . .	—	75			
do. crosser	—	5			
Common, Country . .	—	10			
Shippers on Puller . .	—	17			

OHN A. KINNEY, Editor, by John A. Toy, corner of Market streets, where every description of printing is executed.

AGRICULTURE.

ON DISEASES AND ACCIDENTS OF FARMERS.

Observations on the means of preventing and relieving the accidents and diseases, to which farmers are particularly subject. By JAMES MEASE, M. D.

[From the Memoirs of the Philadelphia Society for promoting Agriculture—Read May, June, July, August, 1825.]

[Continued from p. 35.]

Sprains—Are to be cured by rest, supporting the limb in a position higher than horizontal, day and night, and the application of cloths dipped in cold salt and water, to the part. When stiffness remains, the part should be rubbed gently twice or thrice a day with the hand, for ten minutes at a time, a few drops of sweet oil being previously applied to the hand. If the ankle be the part affected, laced boots should be worn, to give a mechanical support to the joint, and muscles covering it, after the person is able to walk.

Whooping Cough—Give an emetic, and afterwards a purge of calomel and jalap. To cut short the course of the disease, let the child change the air every day or two; and if, as is sometimes the case, the cough be very distressing, apply a burgundy-pitch plaster three inches broad, half way down the spine, from the nape of the neck. The part must be first wiped dry, and the edges of the plaster snipped to make it lie smooth. As this is commonly a trifling disease in children, and a serious one when it attacks persons grown up, and no one can expect to escape it, children should be exposed to those who have it, when between ages of one and four, or five years.

Spitting of Blood—The bleeding may be checked by taking a tea-spoonful of dry fine table salt, and swallowing it slowly. If there be fever or cough, or the pulse very quick, four, six, or eight ounces of blood should be lost, and rest enjoined, with light diet. In the winter, avoid exposure to cold and damp: wear flannel next the skin, and warm stockings, and stout shoes, or over-shoes. A veil is a great protection against cold, for weak lungs.

Cholera Morbus—A violent vomiting and purging. This disease most commonly proceeds from errors in diet, either as regards quantity, quality, or outrageous mixture of food. A new article of diet, eaten at supper in summer, often produces it; such as clams, lobsters, and crabs. The offending cause must be first removed by drinking warm water to promote vomiting, and when the stomach is clean, thin corn-meal gruel, salted, should be taken to assist in the evacuation of the bowels. If cramp in the legs comes on, they must be well rubbed with a cloth dipped in whiskey. If the person feel faintish, warm wine sangaree may be taken. The bowels being well evacuated, twenty, thirty, or forty drops of laudanum may be given, to promote sleep, and quiet the agitation of the system. The next day or two after, a dose of magnesia, or castor oil should be taken, to evacuate the bile which will probably be discharged into the stomach or bowels, and which, if retained, might renew the disease.

Catarrh or Cold—Persons in town or country are alike subject to this complaint, and the attention is particularly called to it, because of the disposition of mankind to neglect it, merely from being able to attend to their business while labouring under it. At this time the foundation may be laying of a serious or long protracted indisposition. A cold, or influenza (which is no more than an epidemic catarrh,) however severe, may be cured in a few days, provided the patient will at once agree to make the attempt. The process is, to take a dose of Epsom

salts or castor oil; if fever be present, to lose twelve ounces of blood, to lie in bed, drink freely of warm flaxseed tea, sweetened with honey, and abstain from meat. Lying in bed is essential to a speedy cure, for a free perspiration, which mainly contributes to throw off the disease, does not take place, when the person is clothed and sits up, although in a warm room. The cough may be assuaged during the early stage of the disease, by liquorice root or lemon candy, or molasses candy; and after the bowels have been well opened, by the addition of five or ten drops of laudanum three times a day, and thirty or forty drops at bed time. At night the feet should be bathed in warm water. By this simple treatment the patient will be cured, and enabled to return to business in one week, while others, who for fear of being made too delicate, permit the disease to take its course, will continue to be distressed by it for weeks, probably lose their voice for some time, and finally, be forced to confine themselves a much longer time, to be relieved of a more serious complaint. Costiveness from the use of laudanum, must be guarded against, by an occasional dose of castor oil.

Vegetable Poisons—Alarming illness, and frequently deaths, have occurred from different wild vegetables being eaten, either raw, or boiled as a substitute for others, which every farmer ought to cultivate in his garden.

Last year two melancholy cases were recorded. One happened in one of the New England states, and another in Cumberland county, Pennsylvania. In one case, near Carlisle, where it abounds, that virulent poison the wild parsnip; and in the other, some plant taken for wild cicely were eaten. Every year cases of disease occur from eating poisonous mushrooms. Beside these last (a numerous tribe,) there are twenty-one native plants in Pennsylvania, which are known to be poisonous, if either externally applied, or internally taken; more may be doubtless found in different parts of the continent.* The youth of a family ought to be cautioned against eating any wild plant, the quality of which they are ignorant of. After the offensive substance has been discharged from the stomach, strong coffee, and brandy, or whiskey diluted with water, should be given to settle the stomach.

The plant, emphatically called poison-vine, or poison-creeper, (*rhus radicans*), which is universally diffused over this country, poisons some persons by merely remaining a few minutes in its vicinity: or by being exposed to its smoke when burning. The symptoms produced are, swelling of the face, hands and arms, or feet, and a painful eruption on the skin. The usual remedies are anointing the parts with cream, or washing them with lead water. Dr. Dewees informs me, that the best remedy he ever used, is strong mercurial ointment. If any watery pustules form, they must be opened with a needle, and the water absorbed by a soft cloth.†

The seeds of stramonium, or Jamestown weed, are often eaten by children, and are highly poi-

* The *datura stramonium* obtained the trivial name of Jamestown-weed, (corruptly Jimson,) from the circumstance of a number of English soldiers having been poisoned after eating the leaves boiled. This took place soon after the settlement of Virginia. In Charleston, S. Carolina, a child was last year killed by eating the flowers of the fragrant yellow jacinine, (*Bignonia semper vivens*.)

† Mercurial ointment ought never to be made with the assistance of turpentine, to promote the extinguishing of the mercury, as such ointment invariably produces inflammatory pimples on the skin, and would increase the disease produced by the poison vine. Mr. W. Anderson, of New York, the American editor of that excellent work, Cooper's Surg. Dict. says, that the preparation of mercurial ointment will be greatly expedited by rubbing the mercury in the first instance with a small proportion of goose grease. One ounce of this article will be sufficient, with rubbing, for the

sonous. The symptoms are convulsive motions of the arms and legs, yawning, loss of power over the lower limbs, dilated pupil, red eruptions on the skin, and swelling of the body, indistinct articulation, and constant catching at objects. The remedy is an emetic, to produce powerful vomiting. If the first does not succeed, a second must be taken. If several hours have elapsed before the use of medicine, a purge of fifteen grains of jalap and ten of calomel should be given. After the discharge of the seeds, five, ten or fifteen drops of laudanum, according to the age of the child, should be given to quiet the system.

Mineral Poisons—Arsenic is the only one likely to cause mischief, from the imprudent use often made of it, under the name of rats'-bane, to destroy rats. It ought never to be used for the purpose. When it has been swallowed, twenty grains of white vitriol should be given, (not tartar emetic) to cause vomiting, and then whites of eggs freely taken. Sugar and water should then be drunk freely, followed by a purge of calomel and jalap. Avoid milk and oil.

Swallowing Fruit-stones—From carelessness or hurry in eating, stones of fruits are often swallowed whole. Cherry stones are even sometimes knowingly swallowed, from a mistaken notion of their assisting the digestion of that fruit. The practice is highly dangerous, and should always be avoided, as alarming obstructions, and inflammation of the bowels have been the consequence of it. Death has not unfrequently happened from this cause without suspicion being attached to the true source of the calamity, nor could relief be given even had it been ascertained.* If those who thus wantonly trifle with their health, knew the structure of the alimentary canal, they would easily comprehend the force of the caution, and avoid the practice which is the ground of it.

Clothes catching Fire—Women should instantly lie down, and smother the flame by rolling the carpet, or some other woollen article around them. Children in like manner are to be enveloped in the coat of a man, or the folds of a woman's gown, if of worsted; water, if necessary, may then be applied. Persons using the spirit or oil of turpentine, must avoid approaching within five feet of a fire, or collection of live coals, or a candle, as the vapour will take fire. All children should be clothed in worsted clothes.

Lightning—If caught at a distance from home, avoid taking shelter under trees; instances every year occurring of cattle, sheep and men being killed by lightning or dashed to pieces by splinters of wood, when flying under trees, to avoid being drenched with rain. If a person has a gun or iron tool with him during a thunder storm, he should leave it on the road, or in the field, as the iron will attract the lightning, and he will be inevitably killed. An English paper (June, 1824,) mentions that a shepherd in England, who was returning from his daily labour in a thunder storm, carrying a fork across his shoulders, was instantaneously killed by lightning; which doubtless was attracted by the prongs of his fork.

(To be continued.)

space of one minute, to make the globules of the quicksilver entirely disappear, and render it at once fit for admixture with the proper proportion of lard. The utility of rancid sweet oil for the same object, as recommended by Delaunay, (*Tromsdorf's Journal of Pharmacy*, vol. 8, p. 162,) has been fully proved in Philadelphia.

* I allude to the death of a promising young man, who had just entered upon the sacred duty of a preacher, from an inflammation in the bowels, caused by a bean slipping into the *appendicula vermiformis*. This note is inserted for the information of the medical reader.

CURWEN—IN REPLY.

WILLIAM J. MILLER, Esq.,

Dear Sir,—You "ask of Curwen a simple question"—"what has been the actual results of Dr. Parry's, or all the other attempts to place the finest wool on the HANDSOMEST carcass?"

I answer, the production of Sheep, in fleece equal, IN FLESH AND FORM THE OPPOSITE OF YOURS.

Your obedient serv't,

CURWEN.

It is shown, that Southdown wool commands as much in England as Merino, although assorted Saxony wool, is most valued.

Quere.—Can any man imagine, that Breeders with capital, zeal and skill, aided by British influence with the court of Spain, were less likely, to select good Merinoes, than commercial speculators.

COTTON SEED—MANURE.

Raleigh, N. C., May 6, 1826.

FRIEND J. S. SKINNER,

I promised thee, some considerable time since, that I would inform you as to the mode, or manner in which "our farmers" employ their cotton seed as a manure. Well then, you and your subscribers, shall have all my experience and observation on this subject, gratis. It will be seen, from some of the former numbers of the American Farmer, that James Madison, formerly President of these United States, has observed, that "he should imagine the cotton plant was a great source of manure to the three oldest Southern states, viz: Georgia, and North and South Carolina." Well, he was precisely right, and the "warm-country plant" (as my old neighbour calls it,) is even more useful, in that way, than Farmer Madison had ever supposed. To the subject then.

Attached to each gin, generally either horse or water, but most commonly the first, is a wooden trough, declining to the earth from the second story of the "gin" into a pen of "mauled rails;" well, the ginner, as fast as the seed accumulates, takes them up with a broad wooden shovel, and throws them into the pen by the aid of the trough very easily. Here the cotton seed accumulates in a large mass, and receives all the winter's moisture, in the different forms of rain, hail and snow; the whole mass grows very warm, so that you can scarcely bear your finger in it—in fact, the heap goes through the three regular fermentations, viz., saccharine, or that which develops the sweetness; vinous; and at last, the putrid.

It is precisely this last which fits it for the operations of the field; and a shovel full of offensive cotton seed thrown round a rose bush in February, may enter into the composition of its "delicate petals" in midsummer—so wonderful and mysterious are the operations of nature, when directed by the hands of the Eternal one. The seed usually remains in the pen until about the last of March, or the middle of April; it is then carried into the corn fields. The different modes of applying it are (as might be supposed,) as various as the changes of the weather.

One mode, and the most economical way, is to scatter it in the corn field in November, or December, about No. 2, with a strong team, until the planting season; when the seed is taken off, and a spade full of the cotton seed is checked, the dirt hauled over, and the seed is covered. The growth is rapid; the corn is green, than corn even on the best soil. This is a real fact, Mr. Skinner. I have seen fields as nature made them, and you have seen, such as bring forth but pin-
ing but pin-
ing but pin-

cotton seed, produce corn which would equal that grown on Roanoke bottoms. It is the practice with some to open drills, in which they deposit their seed, and let them lie out all winter, and thus destroy the vegetating quality in this way, at the same time that the seed are in place against the ensuing spring. More on this subject at another time.

UNCAS.

MEXICAN ONION SEED.

Santa Fee, (N. Mexico,) Feb. 15, 1826.

The enclosed is one of four small parcels of onion seed, of the kind mentioned in my letter of the 7th. This seed was presented to me as the genuine kind, and I have no doubt it is so. But it is somewhat doubtful, I think, if it will produce in Maryland the same fine large onions that it would here. I learn on further inquiry, that the largest onions are produced uniformly from a peculiar kind of soil, that is found in small detached districts in this territory; this soil is very strongly impregnated with salt and salts combined in about equal proportions; and it is said that upon those spots the onions succeed best. It may be that this is a mistake.

They sow the seeds as early as they can in the spring. When the plants are three or four inches high, they draw them carefully with a dibble, and transplant them in beds at proper distances, watering them frequently with cold water as they grow, and keeping the earth entirely from the bulb.

I am yours, respectfully,

G. C. SIBLEY.

JOHN S. SKINNER, Esq.

MEXICAN WHEAT.

Santa Fee, (N. Mexico,) Feb. 7, 1826.

Sir—I have forwarded to Osage Post Office four small parcels of wheat, and desired them to be sent to you from thence by the mail. This wheat is of a very extraordinary kind, and as I am informed, very excellent. It has been but recently introduced into this part of the country, by a person of this city, from Sonora, one of the Mexican states bordering on the gulf of California, where too, it has been known only a few years. It grows very well here, on a poor soil—I am told five or six feet high; each grain produces a very large bunch, each bunch or plant, from twenty to thirty large flat heads, each head many bunches, all filled with grain. The stalk is pretty nearly solid, the upper joint entirely so. It should be sown very early in the spring I am told, but I doubt not it would answer well to sow it in the fall with you. I have put up one of the heads on its stalk for you, from which you will be able to judge of its peculiarities better than from any description I can give of it, I think it probable that there may be a few grains of some other kind of wheat, mixed with this that I send you; If so, they may very readily be distinguished before the seed ripens, and then separated. Should this wheat prove of any value I shall be much gratified. At any rate it is well worth a fair trial, and I am sure that you will cause that to be made, in your state.

I am trying to obtain some onion seed to send you, of a truly mammoth kind, and I have great hopes that I shall succeed, and if I do, you will receive them by this conveyance. I have measured these onions here, (and have one now by me to send home to be planted for seed) more than eighteen inches in circumference, and I am assured that they frequently grow much larger; and what is more surprising, they grow to that enormous size in one season from the seed. They are of two kinds, white and red—the white ones are the largest and best, though the others are very good. I am also collecting some other kinds, and will send them to you as soon as they are ready.

cultivated in the villages along the Rio del Norte between this city and El Paso; these are said to be remarkably fine, and some make excellent wine.

I shall spare no pains to transplant some of each kind to Missouri, from whence, if I succeed, they may be spread even to your city, and then by your agency, far and wide.

I am, with great respect,

Your most obedient servant,

J. S. SKINNER, Esq.

G. C. SIBLEY.

HORTICULTURE.

THE CULTURE AND MANUFACTURE OF SILK.

[For the Report on the important resolutions of Mr. MINER, we are indebted to him and other friends in Congress. The importance of the subject is exposed and explained by the Committee, and the following pertinent observations by the Editor of the Albany Argus, leave us no occasion for writing even a brief introduction.]

"We confess that there is scarcely a branch of industry, which, in our judgment, can be rendered more productive, or in which home material and labour may be made more advantageously to supply the place of foreign production, than in the culture of silk and the ultimate manufacture of silk goods. The history of this manufacture in Great Britain, a sketch of which we published a few days since from the article on this subject in the last Edinburgh Review, exhibited very convincing results of its importance, both as a profitable application of labour, and as a source of national wealth and independence. Aside from any of the extrinsic circumstances, the fact that it affords employment and support to nearly half a million of persons, and is valued at nearly fifty millions of dollars, is a sufficient proof of the magnitude of the manufacture, and of its material connection with the public interests. The manner in which the attention of Congress has been at length turned towards the subject, shows that it is beginning to excite inquiry; and although the progress of any improvement in this way, must necessarily be slow, yet it is evident that it is not to be, as it has been, wholly neglected.

"The following report of the Committee on Agriculture, made to the House of Representatives, on Tuesday last, furnishes a mass of useful and highly interesting facts. The contrast between the amount of the importation of silks and the exportation of bread stuffs, is not less useful. Together, we trust they will make such an impression upon the country (whatever may be the course Congress may chance to pursue,) as will induce an early and steady experiment in relation both to the product and manufacture of this important article of industry and trade."

Mr. Van Rensselaer, from the Committee on Agriculture, to which the subject had been referred made the following Report:

The Committee on Agriculture, to whom was referred the resolution of Mr. MINER, to inquire whether the cultivation of the mulberry tree and breeding of silk worms, for the purpose of producing silk, be a subject worthy of legislative attention; and should they think it to be so, that they obtain such information as may be in their power respecting the kind of mulberry most preferred, the best soil, climate, and mode of cultivation, the probable value of the culture, taking into view the capital employed, the labour and the product, together with such facts and opinions as they may think useful and proper—Report:

That they have examined the subject attentively, and have taken such measures as they thought best to

culated to obtain information which might be useful and lead to satisfactory conclusions.

The facts developed in the course of their inquiries, tend to place the subject in an important point of view. It is an interesting fact, that the mulberry tree grows indigenously throughout the United States, and that silk may be raised with facility from the southern to the northern boundary of the Union. Formerly, considerable quantities of silk were produced in Georgia. In 1766, more than twenty thousand pounds of cocoons were exported from thence to England. The production of the article was suspended, not from any difficulty experienced in the process, but from causes connected with the Revolution. Measures have recently been adopted at Savannah, with a view to the renewal of the cultivation of the mulberry tree and breeding the silk worm. In Kentucky, the committee learn, that sewing silk is now produced in considerable quantities and of excellent quality. Many years ago the attention of public spirited individuals in Pennsylvania was turned to the production of silk. The Persian mulberry was introduced into Bethlehem, Pennsylvania, by bishop Ettwein, where it flourished, and still flourishes. Silk was produced without difficulty. In Chester and other of the southern counties of that state, the experiment was also made with success. The great demand and high price of bread stuffs, owing to the wars growing out of the French revolution, rendered the cultivation of grain so profitable for many years, that the mulberry was neglected. In 1779, two hundred pounds of sewing silk were made in the town of Mansfield, in Connecticut; and in 1810, according to the report of the marshal who took the census, the value of silk produced in Windham county, was estimated at \$27,373. The committee learn that the production of silk is still attended to and found profitable. Some beautiful specimens of sewing silk, the production of that state, have been exhibited to the committee. Of the fact, therefore, that the United States can produce silk for its own consumption, and even for exportation to the extent of foreign demand, there appears no reason to doubt. There are few persons, the committee believe, even the most intelligent of our citizens, (who have not turned their attention particularly to the subject,) who will not be surprised at the view presented by the following official statement of the value of silks imported into the United States the last five years:

Statement of the value of silk goods imported and exported in the years 1821 to 1825, inclusive.

YEARS.	IMPORTED.	EXPORTED.
1821, . . .	\$4,486,924	\$1,057,233
1822, . . .	6,480,928	1,016,262
1823, . . .	6,713,771	1,512,449
1824, . . .	7,203,344	1,816,325
1825, . . .	10,271,527	2,565,742
	\$35,156,484	\$7,968,011

Treasury Dep't., Register's Office,
April 26, 1826.

JOSEPH NOURSE, Register.

What a bounty is paid by us to support the agriculturist and manufacturer of other nations, on articles which our country, with a few years of care, might supply! How important it is that the agriculturist should turn his attention to new objects of production, is very fully shown by the circumstance of the diminished and diminishing demand of bread stuffs abroad.

In 1817, the exports of bread stuffs

amounted to	\$20,374,000
In 1818, " " "	15,388,000
In 1824, " " "	6,799,246
In 1825, " " "	5,417,997

An importation of ten millions of dollars of silks;

an export of five millions of bread stuffs! The facts speak the importance of the subject, and indicate the necessity that exists of awakening the slumbering agricultural resources of our country, by introducing new and profitable articles of production. Knowledge is power, in agriculture, no less than in politics; information is capital, and the means of valuable improvement. The committee conceive that the first and most important measure to be taken, is to acquire and circulate clear, distinct and precise information on these points: The relative value of the cultivation of the mulberry, and the production of silk, compared with other agricultural productions in the different sections of the Union, capital and labour being considered. The kind of mulberry best suited to the object; the most advantageous mode of cultivation; the most approved manner of managing the silk worm; and an explanation of the process till the article is ready for market. The committee incline to the opinion, that the best mode of raising silk will be for every farmer and planter to appropriate a small portion of ground, as for a fruit orchard, for raising the mulberry tree, calculating to produce as many worms as his own family will enable him to manage without increasing his expenses, and without permitting it, until the experiment shall have been fully tried, to interfere with the regular course of his usual pursuits. A single acre planted with the mulberry will produce from 500 to 600 pounds raw silk, the value of which to the individual would richly compensate for the capital and labour employed, and the aggregate to the country be of great importance.

The fact is worthy of notice, that notwithstanding the high price of land in Ireland, where a year's rent of land exceeds the price of the soil in many parts of our country, yet so valuable is the mulberry considered, that importations of trees from the Mediterranean have been made during the last year, for the purpose of producing silk. Your committee addressed inquiries to several intelligent gentlemen who were presumed competent to give them information upon the subject; and among the papers received in reply, they beg leave to present to the particular attention of the house, a valuable memoir, replete with interesting facts and useful information, from Edmund C. Genet, Esq.; and also several communications from other gentlemen, to whose attention the committee acknowledge their obligations. As the result of these inquiries, believing that knowledge on the subject is of the first importance, the committee submit the following resolution:

Resolved, That the Secretary of the Treasury cause to be prepared a well digested manual, containing the best practical information that can be collected on the growth and manufacture of silk, adapted to the different parts of the Union, containing such facts and observations in relation to the growth and manufacture of silk in other countries as may be useful, and that the same be laid before Congress, at the commencement of their next session.

FROM MR. GENET.

Notes on the Growth and Manufacture of Silk in the United States.

The various repositories of knowledge on agriculture and horticulture, having extensively treated the zoological history of the *Phalera Bombyx*, or silk worm, and the best methods of raising and multiplying the several species of the morus or mulberry tree, upon which that valuable insect feeds itself exclusively, I will confine myself, in these notes, to present only the principal facts and observations which may have a tendency to assist in the decision of the question now before the Agricultural Committee of Congress, viz: "If the growth and manufacture of silk is an object worthy of legisla-

tive attention and promotion in the United States?"

This important question leads, in the first place, to ascertain if the latitudes of the several states are equally favourable to the growth of the silk worm and of the mulberry tree. In Asia, Africa, and Europe, the cultivation of that insect, and of that tree, flourishes from the 20th to the 50th degree of northern latitude. Under the same latitudes, the mulberry trees in the United States are indigenous; and as nature has appropriated every plant to the support of certain insects, we may conclude that the silk worm and its favourite tree, indeed the only tree upon which it feeds, would both prosper here as well as in China, Bengal, Mongolia, Hindostan, Asia Minor, Turkey, Egypt, Barbary, France, Spain, Portugal, Italy, and England, if it was encouraged as it has been in those countries.

Latitudes nearer to the equatorial line than the 20th degree, and beyond the 50th degree, may, perhaps, with a great deal of care, be also enriched by the cultivation of silk; but it has generally been observed, that very warm southern winds, and extremely hot air, always make the silk worms sick, and frequently occasion their death; and that very long and severe winters, such as those experienced above the 50th degree of northern latitude, are also contrary to their propagation. A moderate temperature is the best for those delicate animals and their seed; and none, on that account, would be more congenial with their nature than the United States.

That opinion is not grounded on analogy and presumption alone, it is supported by the strongest of all arguments, by actual experiment. Several industrious and ingenious females of the county of Rensselaer, in the state of New York, and many others, in the states of Massachusetts, Connecticut, Vermont, and New Hampshire, and very likely, though not to my knowledge, in other states, have made the raising of silk worms, and the drawing, spinning and twisting of sewing silk, an article of domestic management and trade; and that article, very well known in our markets, is preferred on account of its strength, if not of its perfect evenness, to the French, English, or Italian silks of the same kind. Handsome fancy goods have also been woven in combination with cotton, with silk raised in this country; and we have in New York, a small manufactory, where the handsomest waistcoat patterns have been produced at a much lower price than those that were imported.

Having proved, by the preceding facts, not only the practicability, but the existing practice, of raising silk worms and silk in the United States, I will, in the second place, examine, if the raising of that commodity would be, upon a large scale, congenial with our mode of agriculture, and of our variegated population. This subject requires a subdivision of the United States, in relation to their two different climates, and also to the two better different methods of raising the silk worms in open air or in houses.

The first method would, it seems, suit the southern states; and the second method the eastern and northern states.

The cultivation of silk in open air is extremely easy in warm climates, and requires very little attendance. It is the most common in China, where the mulberry trees and the climate are so agreeable to the silk worms, that the quantity of silk produced in that way is incredible. The single province of Tchehiang might alone, it is reported, supply all China, and even a great part of Europe, with that commodity. Great quantities of silk, raised in the open air, are also imported raw from the East Indies, in England; but those silks are harsher and coarser, than those raised in houses—a circumstance which had made several authors believe that it was the production of a different insect called *Ser*, which was supposed to live five years.

while the *Bombis* dies annually. But that fiction is now discredited, and the difference in the quality of the silk is more justly attributed to the effect of the oxide rays of the sun, equally operative on silk as on wool; as it has been observed very advantageously by the Saxons, who owe, in a great measure, the superior fineness and higher value of their merino wool to the ingenious improvement of protecting their fleece with linen jackets against the rays of the sun. If, however, the silk and the wool raised in the air, and exposed to the sun, are harsh, they are more abundant than the silk sheltered from the radiant matter, and would, notwithstanding, become a most valuable article for the southern states. The eastern and northern states, on the contrary, could enlarge the cultivation of the housed silk worm, which requires greater nicety and vigilance, and a more attentive and judicious management.

It seems that our two systems of agriculture agree with the two modes of raising silk. But if we can raise that commodity, a third question arises: will its growth be profitable, or offer greater advantages than the articles which now constitute the staple produce of the northern and southern states?

To answer that question, it will be sufficient to state, as a matter of fact, that the planting and attending the mulberry trees, either in orchards or hedges, to accommodate, according to the climate, the two methods above mentioned, is the hardest part of that branch of industry; and that the rest of the process, which occupies only the fifty or sixty days to which the life of the silk worm is limited, may be conducted by females, children, and old or invalid men, unable to perform hard labour on any farm or plantation, and will accordingly offer a new gain, without impairing the other sources of income. It is, besides, proper for legislators to consider, that the more the science of mechanics, applied to manufactures, substitutes machines to manual labour, the more it is useful to supply the females of our country, whose number is every where superior to the number of men, with the means of supporting themselves, or the families that support them, and that no occupation, besides the spinning of flax, and its manufacture, not yet entirely conquered by mechanics, seems to be better calculated to employ the time of that supernumerary part of the population, than the cultivation of silk.

It will certainly be a great while before a sufficient quantity of silk can be raised in the United States to become an article of exportation, or to supply even the few silk manufactures of our own country, which now import the whole of their incipient materials. But, if the Italians, who first cultivated the silk worms in the year 1455, from seeds, brought with a great deal of trouble and care, to Rome, by two missionary Monks returned from the East Indies, had been indifferent about the domestic growth of silk, valued at that time almost as much as gold; and if the French, the English, and all other European nations who have acquired wealth by the cultivation of that article, had not, by bounties and rewards, promoted, at first, its introduction, and afterwards protected its extension by various laws, no other silks, to this day, would be worn, but those imported from China and the East Indies. Comparatively speaking, we are now in America, in reference to silk, several centuries behind the other manufacturing nations. That commodity, whether we import it from India, China, or Europe, is for us an immense absorbent of our substance, and the sooner we prepare the means of stopping, effectually, that drain through which a great quantity of bullion escapes from the vaults of our banks, the better it will be for the progress of our wealth and prosperity at home.

The growth of the raw silk in a merchantable form, is a hardy and capital, and requires a great deal of labour and capital.

An ounce of the seed of the silk worms will produce 40,000 worms, that will consume one thousand pounds of white mulberry leaves, easily supplied by fifty grown trees, or two hundred small ones, between two and three years old, from the seed or from the slip; and the produce in silk will be upon an average twelve pounds of drawn raw silk, allowing all contingencies.

A small hedge that will occupy the twentieth part of an acre, being planted with bushes not more than three years old as aforesaid, will supply and accommodate 100,000 worms, the produce of which will be thirty pounds of raw drawn silk, and if the whole acre is planted in the same way, the produce will be six hundred pounds; which, if merely spun into sewing silk, would amount, at the present price of American sewing silk in Albany, to three dollars per pound, sixty feet to the skein, and one dollar and fifty cents per thirty feet.

If the worms are housed instead of being raised in the air, it is reckoned that a square foot will contain, with ease, one hundred and ten worms in their maturity; accordingly, a shelf, twenty feet long and three broad, will contain 6,500 worms, its surface being equal to sixty feet; and a set of such shelves will accommodate the 40,000 worms produced by a single ounce of seed. These sets of shelves may be multiplied in the same room, observing only, to leave three feet opening between them, in order to enable the attendants to nurse the worms. Besides such a room, in which several millions of worms may be raised, it is sufficient to have an adjacent room or hovel to put the worms when they want to make them ball and spin their silk; so that two rooms will be sufficient to raise an immense quantity of silk.

There are several species of mulberry trees cultivated for the seed of silk worms; but the white, *Morus Alba*, seems to be better calculated for the northern climates than the *Nigra*, inasmuch as it is not affected by cold, while the *Nigra* is more liable to freeze. But the leaves of the *Nigra* are so much more rich and solid, particularly in the southern regions, than the *Alba*, that it is reckoned in France that one hundred pounds of *Nigra* leaves afford more food than three hundred of the *Alba*—and that accordingly one black mulberry tree is equal to three white ones of the same size. This circumstance would be much to the advantage of the southern states, and would enable them, with two-thirds less trees and ground, to raise the same quantity of silk, superior also in quality, the silk being always in proportion to the strength of the insect, and the strength of the insect in proportion to his food.

The only thing that has stopped in England the progress of the cultivation of silk under the reign of James I. was the want of a sufficient quantity of mulberry trees. That culture ought then to precede any other improvement in the raising of silk in this country, as no dependence can be placed on the trees growing in the woods; and if it was the wish of Congress to promote the growth of silk among us, I should think that bounties awarded to the cultivators who should raise a certain number of mulberry trees from the seed, or from the slip, in each state, as well as to those who should grow a certain quantity of silk in the ball fitted for market, and proportionately drawn and manufactured either in thread or cloth, would have a great tendency to urge the national industry.

I should think further, that a well digested manual, containing the best practical information that could be collected on the growth and manufacture of silk, with descriptive plates and illustrations, would be extremely useful to promote the desired object. I possess on those several subjects, very extensive French, Italian, and English treatises; and I should with pleasure, if it was thought proper, translate them into English.

patriotic economist, supply my contributions towards its completion.

E. C. GENET.

Albany, January 21, 1826.

Extract of a letter from Abraham Stout, M. D. to a member of Congress, dated

Bethlehem, Pa., Jan. 14, 1826.

MY DEAR SIR,

In your letter of the 30th of December, you make particular inquiry, whether I had obtained any mulberry seed for you last spring. At the time you were here last spring, I was not aware that the flowers of the mulberry trees were all destroyed by the late and severe frosts which we have had; but soon after discovered that that was the case; consequently no seed could be obtained. But nothing is lost by that event. To raise trees from the seed is very tedious and objectionable. Our practical men agree with Forsyth, that the best and most expeditious way of raising a large number of mulberry trees, is from the cuttings; consequently, it was my intention to send you a large quantity of cuttings next March. From the size and number of trees which are growing in this vicinity, I think I can safely promise you four thousand cuttings; and should a further supply be desired, the above number can be obtained here annually. Although I do not pretend to give you a memoir on the mulberry trees, but from the little knowledge which I have of their growth, and the information which I have received from practical men in this town, I can assure you, that no tree of our forests, grows with more luxuriance than the genuine Persian mulberry does with us. They are growing here on elevated gravelly regions, on limestone soil, and bottom land with equal success. They are like a phoenix, they sprout from their ruins with an increased vigour. You might ask the question here, whether the mulberry trees in question, are the true kind, on the leaves of which the silk worm feeds? Of this, there is no doubt. The cuttings from which these trees were raised, were imported from Europe, by Bishop Ettwein, who has been largely engaged in that country, in silk establishments. After his arrival in this country, he cultivated the trees, and succeeded, beyond his most sanguine expectations, in breeding the silk worm, and manufacturing silk, equal in quality to the best China silk. We have two varieties here of the imported mulberry; one bears a purple, and the other a white fruit. Both are considered equally good, though some prefer the white.

Bishop Ettwein's method of breeding the silk worm was extremely simple, and attended with hardly any expense. At the time his silk worms had arrived to maturity, and showed a disposition to deposit their eggs, he gave them large sheets of paper, upon which the eggs were lodged. The sheets were then rolled up, and loosely packed into a box, after which he closed the box, and kept it in a dry and cool cellar, where he let them remain until the following spring. As soon as the mulberry leaves had acquired a sufficient size to afford food enough for his worms, and the season so far advanced, that he was under no apprehension that the crop might be cut off by frosts; he then opened the box and laid the sheets into a room of the temperature of 70° F. In a few days, the small worms made their appearance. He now began to furnish them with the mulberry leaves, still keeping sheets of paper under them. When one part of the paper became soiled by the excrements of the worm he put the fresh leaves upon a clean part, to which the worms immediately travelled for their natural food, which gave him an opportunity to clean the soiled part, and remove the worms. The worms require a great deal of food, and a room of thirty-six days is required for them to spin their cocoons.

cocoons. At the time the worms begin to spin, the Bishop gave them plenty of branches of trees, on which they formed their cocoons; and when they were too much crowded, he made paper cones, and put one in each, in which they began to spin. As soon as the worms had completed their cocoons, they were thrown into boiling water, and stirred with a stick; on the extremity of the stick, the ends of the silk became attached, from which the ends were collected, and reeled off the cocoons. The silk is then spun and prepared in the usual manner. I have omitted to mention, that the mulberry leaves must be thoroughly dry, before they are given to the worms, otherwise they will die. When I say dry, I mean free from moisture of either rain or dew.

DEAR SIR, Mansfield, Conn., Jan. 17, 1826.

Yours requesting information respecting the manufacture of silk, has been received.

My attendance on the superior court has prevented an early reply. I have devoted yesterday and today to the subject, have consulted those who have had the most experience, and are best acquainted with the business; by which I am enabled to give you the following statement, which I think may be relied on as substantially correct.

One acre of full grown trees, set one and a half rods apart, will produce forty pounds of silk. The labour may be estimated as follows: For the first three weeks after the worms are hatched, one woman acquainted with the business, or children that would be equal to such person. For the next twelve or fourteen days, five hands, or what would be equal to five, if performed by children.

In this period two men, with other help, would be employed to better advantage, than all women or children. This period finishes with the worms. For picking off the balls and reeling the silk, it will require about the same amount of labour for the same length of time as the last mentioned period, which may be all performed by women and children. The aforesaid labour and the board may be estimated at \$80; the spinning the silk, at \$34.

Forty pounds of silk at the lowest cash price is now worth \$200—which makes the following result:

40 lbs silk, at \$5 per lb.	\$200
Labour and board,	\$80
Spinning,	\$34—114

which makes the nett proceeds of one acre, \$86

The principal part of the labour may be performed by women and children; but where the business is carried on to any considerable extent, it is considered more profitable to employ some men for the last period of the worms. The above calculation is made upon full grown trees. The prices at the lowest cash prices. On land adapted to mulberry trees they will continue to grow nearly forty years.

But in a few years, (say ten,) they will be large enough to be profitable. In two or three years they are large enough to set from the seed; and the leaves may be picked every year after the year they are set.

It is considered here that warm loam land, or land adapted to wheat and apple trees, is the best for mulberry trees.

They will bear cultivation and manuring which will increase their growth as much as any tree or plant whatever.

Where the trees are in warm, rich land, the leaves are much thicker and larger, and the quantity and quality much improved.

The quantity of silk manufactured in this town last year was about 3000 lbs., which was not considered an average year on account of the extreme hot weather which commenced about the time the worms were beginning to wind, on account of which

a great many died before they had completed their balls.

I believe the foregoing answers all your inquiries. If any thing else should be wanted, I will cheerfully give you all the information in my power. As to the quality of the silk, there is no doubt of its being equal, if not superior to any imported.

If the gentlemen of the committee wish to see a sample, I will furnish one if required.

It is thought here by those best acquainted, that it is the best business to which land can be appropriated when the soil and climate are adapted to the trees, on account of the profit from the land, and on account of its furnishing a lucrative employment to so many women and children, whose labour could not be so productive in any other business. We hope Congress will afford us some encouragement.

Respectfully, your friend and obed't serv't,
JOHN FITCH.

ON THE CULTURE OF THE GRAPE VINE AND THE MAKING OF WINE,

By Thomas M. Call, Esq. of Laurens county, Geo.

(From the Southern Recorder.)

Several kinds of this valuable plant may be found in the neighbourhood of our farms, where nature has placed each kind in its proper soil and climate: if these were cultivated for ten years, good wine might be made from several of them. The blue bunch grape, *Vitis Sylvestris*, Lin. is in several varieties on our high and low grounds: it makes an excellent red wine resembling Claret. The wild Muscadine, *Vitis Vulpina*, of Lin. is sometimes called the Bullus grape; it has very weak juice, but will answer to mix with other kinds to communicate flavor. The Fox grapes, *Vitis Lubrusca*, of Lin. of which there are red and purple; the juice is very austere and fragrant, and will probably make good wine. The Winter or Bermuda grape, *Vitis Scrotona*, of Lin. inhabits the banks of our rivers, ripens near the coming of frost: it will probably make wine resembling Port.

Foreign Vines.

The vines of foreign countries should be brought to us under their foreign names, and their uses described: they should be transplanted to climates and soils similar to those from whence they are brought: for, says L. de St. Pierre, a practical man, the goodness of the wine depends on the nature of the plant, the nature of the soil and the climate.

In Georgia we have every kind of soil, and probably every climate to suit the best wine grapes of foreign countries; but the proper kinds of grapes are wanting: our mountain sides may suit the vines of Burgundy, Champaign, and other countries having similar climates; and near to the Florida boundary may suite the vines of Madeira—Champaign and Madeira have the coldest and warmest climates for the best wines. The vines of Madeira would not suit in Champaign, nor those of Champaign in Madeira—their climates and soils, as well as seasons, are materially different: hence we may infer, that a bad grape in one climate, may be a good one in another. All kinds should be tried. I have tried fifteen, or more varieties, and only five have been worth preserving; three for the table and two from which I make wine; neither of them were considered to be good wine grapes—one is called the Warrenton, from whence I have it, and the other is called the Madeira, from its colour, but I think it is not a Madeira grape.

In 1816 and 17, I planted 92 Madeira and 28 Warrenton vines on a quarter acre of poor piny land, enriched with manures to about the fertility of 15 bushels of corn an acre: recently, I have procured other kinds, sent to me by a friend at Anna-

poli, who first instructed me to prune and dress vines in the manner of Speechley in the vinery, and other kinds from other places—names generally are wanting—amongst them are the Syrian, a Chasselas, a Burgundy, a Constantia, a Madeira, the Tokays, Isabella, Sweetwater, &c.; some of them are of a year's growth, and others are not yet planted.

The pruning and dressing of my vines was rather negligently performed for two years, and the proper shape of plants has been injured thereby, and cannot now be corrected without cutting them down nearly to the ground. The vine admits of no neglect—the richness of the fruit depends on the careful cultivation of the vines, as the following experiments, made with Beaume's hydrometer for syrups, will show:

Hydrometer in water	0 deg. sp. gr.	1.000
In juice of Madeira grape in 1820	6,50	1.044
" " " in 1824	9,25	1.066
" Warrenton grape in 1823	9,25	1.066
" " " in 1824	10, " "	1.072
" Wild Muscadine grapes	6, " "	1.040
" Wild bunch grapes	11, " "	1.080

The foregoing were the degrees of strength in the unpressed juice; when the juice is pressed and mixed, it will be somewhat lighter: the specific gravities corresponding to the several degrees, is taken from the Artist's Manual, by Cutbush. Beaume's is not an accurate hydrometer: an instrument made of brass with weights, to shew the specific gravities of the juice would be preferable.

That grape which yields the heaviest juice will make the strongest wine; but the grape that yields juice with the nicest proportions of the principles, necessary in a good must, will make the best wine, although it may not be the most spirituous. What may be the best proportions of the principles for a good must, is unknown; the most obvious of the principles in the juice of ripe grapes are water, sugar, or the sweet principle, tartarous acid or the sour vegetable mucilage, tannin or bitter, colouring and perhaps aroma, and others of less importance. The uses of the principles appear to be as follows:

The water is the principle in which the others are formed and mixed in the grape, and may be in excess or deficient quantity for the others:

The sugar yields the spirit, and is the most material in giving weight to the juice, superior to the weight of water; if the sugar is in too small quantity, the wine will be weak, and perhaps tart; if in too large proportion to the others, the wine will be sweet:

The tartar is said to contribute to the spirit, and gives the vinous taste to the wine; it may be in too great quantity as in sour grapes, and in too small quantity is in very sweet ones—it assists the fermenting principle:

The vegetable mucilage is the leaven of fermentation, and may be in excess, as in pulpy grapes, or in too small quantity, as in grapes yielding thin juice; if in excess, the wine will be liable to excessive fermentation and become acetous; and, if in too small quantity, the fermentation will be languid, and the wine will be sweet or tart according to the predominance of the sugar or tartar, because of the deficient fermentation.

The tannin is a necessary principle for condiment, and to give durability to the wine; it may be in excess, as in austere grapes, or in deficient quantity as in very sweet ones; but it generally resides in the stems of the grapes.

The colouring principle resides, generally, in the skins of the grape, but in some kinds it resides in the skins and juice, as in claret grapes; but in white grapes it is absent.

The aromatic principle is of doubtful existence, as Chemists are not agreed whether it is a distinct principle, or is a result of the combination of the others under the fermenting process.

When the grapes are grown to full size, and before they begin to change their colour to ripeness,

the berries contain nothing but verjuice which is water, tartarous acid and vegetable mucilage, and the water is in two small quantities for the others: at this stage of maturity, we are informed by Macculloch after Maquer, that if a portion of water is added to the bruised grapes, and subsequent to pressure, three pounds of sugar per gallon be added, by due fermentation the wine will be undistinguishable in strength and flavour from the best white wines of France, whether sparkling or still, according as the fermentation may have been conducted. When the grape is fully grown, and begins to change colour to ripeness, the saccharine begins to be secreted, and the colour to be formed; as the saccharum principle increases, the tartar and mucilage decreases, until the grape is ripe. If, when the grape is ripe, there is not a sufficiency of the saccharine principle to yield the desired quantity of spirit to the wine, which may be known by the weight of the must (unfermented juice), the legitimate practice is to add sugar until the tartar is saturated and the weight is sufficient; but if the tartar is super-saturated with sugar, the wine although it is fermented to dryness, may be strong, but will not be of good vinous flavour.

Vines require many years of careful cultivation to bring them to a full state of vinous maturity, and their several principles to the nicest proportions that the plant, soil and climate are susceptible of.

When we cultivate the Tokay vines until the juice of the grapes will raise the hydrometer of Beaume to the 10th or 11th degree, we may expect to make wine of the strength and delicious flavour of Tokay.

When we cultivate the Burgundy grapes, called *Taconne* or *Meunier*, and the *Pinneau*, until their juice will raise the hydrometer to the 13th or 14th degree (the latter degree is sp. gr. 1.106,) we may expect to make wine equal to the best Burgundy and Champaign.

When we cultivate the grapes of Madeira, until their juice will raise the hydrometer to the 17th degree (sp. gr. 1.132,) we may expect to make wine as strong as the best Madeira, without the necessity of adulterating it with brandy.

But, until the several grapes, before mentioned, shall yield must of those several degrees of strength, sugar will necessarily be added to the must to produce the required strength or spirit, in the several wines. It is only to poor wines that brandy is added to give strength and make them marketable: the Madeira, Port, Sherry and Sicily wines, with which the American markets is supplied, are all of this description, and are mellowed into a fit condition for drinking by a long sea voyage, long residence in the cask, and exposure to several summers of garret heat when bottled, whereby the brandy is mellowed.

Preparations necessary before the Vintage.

Baskets in sufficient number, 7 inches deep, and to hold a bushel.

Knives with hooked points, to cut the footstalks of the bunches.

Vats made of white oak staves and heading, four feet high and about 26 inches diameter, with a bored two or three inches from the bottom, and a drive a faucet with a spigot to draw the juice before pressing. A bunch of vine twigs, held down by a stone, to prevent the juice from being soaked by the skins and seeds.

Wine from the vats, to be mixed before pressing.

Wine from the vats, to be mixed before pressing.

Tight, clean white oak casks of various sizes, to suit the quantity of grapes to be collected at one time, with kegs, jugs and bottles to hold some of the wine to fill up the casks during the fermentation. The casks necessary for a quarter acre of full bearing vines should be 10, 25 and 33 gallons, in sufficient number to hold 200 gallons; and for an acre of vines 10's, 25's, 50's, and 100 gallon casks, in sufficient number to hold 800 gallons.

A wine press, made as a cider press; but straw is not to be used: for a quarter acre of vines, the box should be two feet square within, and for an acre, four feet square within, and 18 or 20 inches high, or deep. The press and vats should be under slight cover to keep off rain.

A store room above ground with strong wooden frames 30 inches high to hold the fermenting casks, and for the convenience of racking the wine from the lees into casks placed below on the ground or floor. It is necessary to ferment the wine above ground, for the carbonic acid gas evolved during the fermentation, being heavier than the atmosphere, subsides to the bottom, and would occupy the space from the floor to the doors, or surface of the ground, if the fermentation were carried on in a cellar—the gas is destructive to animal life.

A deep cellar, or vault, dry with a moderate degree of light, accommodated with a strong wooden frame 30 inches high, to place the casks on after the wine is drawn from the lees, and for the convenience of drawing off from the lees as they subside during the insensible fermentation, wherever it may be necessary. A cellar is the best place of deposit for wine, being cooler in summer and warmer in winter than the common atmosphere. Heat is greatly injurious to wine, as it urges the insensible fermentation too quickly, and keeps it on the fret; cold is also injurious as it retards the progress of insensible fermentation; the temperature of the wine should be as nearly the medium temperature of the climate as practicable, at which state the wine is the most agreeable to drink; for if it is chilled, as in winter, it is necessary to expose it near the fire, to raise the temperature to that of the climate; if the wine is heated, as in summer, it is necessary to cool it by such means as are convenient, to lower its temperature to that of the climate, and make it agreeable to drink.

Dry brown sugar, in sufficient quantity to add 24 ounces to every gallon of juice, or rather more if necessary to raise the hydrometer to the degree required. When we get grapes to yield juice strong enough, sugar will be unnecessary.

Good French Brandy to rinse the casks, before the wine is poured into them to ferment, and to rinse the casks before racking the wine into them. Hot wine will answer the purpose.

To be continued.)

your wishes.* The disappointed hope may be the means of drawing you nearer to God; and you may yet apply to yourself those consolatory words—"Blessed is the barren that is undefiled: she shall have fruit in the visitation of souls." (*Wisdom iii. 13.*) And again, what a sweet promise to the childless who please God, and keep the Sabbath, and take hold of his covenant: "Even unto them will I give in mine house, and within my walls, a place and a name better than of sons and of daughters: I will give them an everlasting name, that shall not be cut off." (*Isaiah lvi. 5.*)

Chapter X.

CONCLUSION.

And now, good lady, on the first of all subjects, allow me a moment's attention. When surrounded by affluence and comforts—when happy in the possession of your husband's affections, and blessed with a smiling offspring; when health sparkles in your eyes, and pleasure attends your footsteps,—then beware lest thou forget the Lord. "Beware and tremble, ye women that are at ease; be troubled, ye careless ones: rise up, ye women that are at ease; hear my voice, ye careless daughters; give ear unto my speech." (*Isaiah xxxii. 11, 9.*) Now, gentle lady, observe with great attention those very remarkable expressions of the prophet. He says not, Tremble, ye women who live in sin; but, tremble, ye women who live at ease. He says not, Be troubled, ye wicked ones; but, Be troubled, ye careless ones—ye careless daughters; ye who dress, and dance, and laugh, and sing, and who never read of me, nor think of me, nor speak of me. Hear this, and tremble, ye careless daughters, and know that "she that liveth in pleasure is dead while she liveth." (*1 Tim. v. 6.*)

MY HUSBAND.

When various nymphs, with beauty's smile,
Threw round their fascinating wile,
Thy manly bosom to beguile,

My Husband!

Then, who, by love's strong powers impress'd,
Selected me from all the rest,
And thought me wisest, fairest, best?

My Husband.

Resigning what's call'd liberty.

A willing captive now to be,
Who gave up all the world for me?

My Husband.

* The author had a relation that was married some years without having a child. Her feelings partook not only of grief, but of anguish: at length, a lovely boy was granted her—"Spare, O God! the life of my blessing," was her constant prayer. Her blessing was spared: he grew to the years of manhood; squandered a fine fortune; married a servant maid; and broke his mother's heart!

Another intimate friend of the author's was inconsolable for not having children. At length, the prospect of her becoming a mother was certain, and her joy was extreme. The moment of trial arrived: for four days and nights her sufferings and torture were not to be allayed by medical skill or human aid. At length, her cries ceased; and, at the same moment that she gave birth to two children, she herself had become a corpse. "Give me children," said the impatient and weeping Rachel, "or else I die." (*Gen. xxxi. 10.*) Her prayer was heard; and in giving birth to her two children, the ill-judging mother expired.

Another impassioned mother, who was the mother of her sick infant, called out, O no; I cannot resign him. It is impossible: I cannot resign him." A paroxysm, struck with her words, noted them down in a daily journal which he kept. The boy recovered; and that day, and that night, he was changed as a man.

DEPARTMENT.

will of
greeted
may, as it
my pleasure for the
it's wish; but seek me,
bring it to pass.
even then could
to your prayer,
he motive of his denial,
gratit

Who ploughs, perhaps, the foaming main,
Or boldly joins the warrior's train,
For me Dame Fortune's smile to gain?
My Husband.

Who plants his groves and woodlands o'er,
Or tills the fields, or ploughs the moor,
To fill my purse with golden store?
My Husband.

Who, led by Wisdom's steady star,
Displays his talent near and far,
At church, the senate, or the bar?
My Husband.

And who, superior to pretence,
With brilliant wit and eloquence,
Delights me with his manly sense?
My Husband.

Who clasps me to his faithful breast,
And vows, that of such love possess'd,
No mortal man was e'er so bless'd?
My Husband.

Then let me use my utmost art,
Domestic comfort to impart,
And never pain thy constant heart,
My Husband!

O yes! with woman's softest powers,
I'll pluck the fairest, sweetest flowers,
To strew with love thy passing hours,
My Husband!

And crown'd with peace and harmony,
Thy life so very sweet shall be,
Thou'lt bless the day thou weddedst me,
My Husband!

SPORTING OLIO.



CANTON RACES.

FIRST DAY.—One of the most beautiful races we have ever witnessed took place on Monday, on Canton Course. The spirited manner in which each heat, nay every round, was contested, kept up a high degree of excitement among the people. Five horses appeared panting with what among men would be called ambition to compete for the purse.

Brainworm, Fairfax, Rhoderick Dhu, Louisa Sims and the *Forest Maid*, started eagerly about half past 12 o'clock. *Fairfax* and *Louisa Sims*, (the grey filly) ran side by side for the greater part of the first heat, whilst the rest, near the leading horse, seemed to be moving in harness, so close was the competition: *Fairfax* came out ahead. In the second heat, when all expectation was raised by *Fairfax*, the grey filly *Louisa Sims* shot ahead of the other and gained the heat.—The third heat was closely contested between *Louisa Sims, Brainworm, Rhoderick Dhu*, and *Forest Maid*; the grey filly *Louisa Sims* came in victorious.

Time of running.

1st heat in 5 minutes 52 seconds.
2d heat in 6 do. 2 do.
3d heat in 6 do. 7 do.

SECOND DAY.—The racing over the *Canton Course* on Tuesday, fully justified the anticipations which were entertained of fine sport. The running and contest amongst the horses, were only equalled by the races of the day before. *Fairfax, Lady Hal*, and *Oscar*, started for the first heat. The purse was won by Mr. Potter's horse *Oscar*, beating *Lady Hal* in the second and third heats, by about a length.

Time of running.

1st. Heat 3 m. 55 sec.
2d. Heat 4 m.
3d. Heat 4 m. 20 sec.
Fairfax, 1 Bolted.
Lady Hal, 2 2 2
Oscar, 1 1

HALIFAX RACES, NORTH CAROLINA.

First day sweepstake, 1 mile, was won by Mr. West's filly, *Claybank*.
Second day proprietor's purse, Mark-Time won.
Third day Jockey Club, 4 miles, was won by *Flirtilla*.
Fourth day Handicap, by Mark-Time.

LAURENCEVILLE, VIRGINIA.

First day sweepstake, 1 mile, was won by Mr. Harrison's *Epicus*.
Second day proprietor's purse, by Mr. Johnston's *Betsy Richards*.
Third day Mr. Johnston's *Shakespeare* won the Jockey Club.

BELLEFIELD.

First day sweepstake, 1 mile, by Mr. Johnston's *Pirate*.
Second day Jockey Club, was won by Mr. Johnston's *Shakespeare*.
Third day proprietor's purse, by Mr. Johnston's *Betsy Richards*.

PETERSBURG, VIRGINIA.

First day sweepstake, 1 mile, was won by Mr. West's filly, *Miss Halifax*.
Second day by Mr. Johnston's *Betsy Richards*.
Third day Jockey Club by Mr. Field's *Gohanna*.
Fourth day, Mr. Winn's *Ariel*.

RICHMOND, VIRGINIA.

First day sweepstake, by Mr. Field's filly.
Second day Mr. Elliott's filly *Janette*, proprietor's purse.
Third day by *Ariel*.
Fourth day by Mark-Time.

Races yet to come—Nottoway, Fredericksburg, Hanover, Gosport, Norfolk, and New York.

NEW-YORK TROTTING CLUB.

The above Club was got up last year with a view of improving the speed of road horses, which they consider the most useful of their species, and it met with great encouragement from the admirers of that noble and most useful of animals; the following are offered by the Club, as an inducement to persons owning good horses to train and enter them for the prizes, and by these means many horses whose speed is now in obscurity will be brought into notice, and consequently their value enhanced. The Club's course is near the Jamaica turnpike road, about a mile below the Union Course, L. I.

The 1st day's purse this spring of \$200 will be trotted for on the 16th inst. at 2 o'clock, P. M. under the saddle 2 miles and repeat.

2d day the 17th, a purse of \$200 to be trotted for in harness 2 miles and repeat.

3d day the 18th, a sweepstake of \$200, under the saddle 3 miles and repeat; open for trotters, pacers, and rackers.

A piece of plate is to form half of each purse. The weight to be carried is 150 lbs. for saddle horses, and a feather for harness.

Horses to be entered the day previous at John P. Snediker's, at 4 o'clock, P. M.

[Why are not clubs like the above formed in this vicinity? It would afford an excellent test for the speed and value of *harness* horses, as the turf does for the race horse; who will set it agoing?]

MISCELLANEOUS.

SOUTHERN NATIONAL ROAD.

Agreeably to a resolution of Congress, an estimate of the probable cost of the construction of the proposed National Road from Washington to New Orleans, has been laid before that body. The following is a view of the aggregate estimates of the three routes surveyed:

ESTIMATE OF THE EASTERN ROAD.

	miles.	per mile.	No.	
Roads	856 5-8	\$2,400 (1)	\$2,055,000	\$
Do.	237 5-8	\$5,508 (2)	1,308,838 5-3,364,738 5	
Bridges	6 3-8	246,400 (3)	1,570,800	1,570,800
Causeways	34½	15,000 (4)	445,250	
Do.	1 1-8	15,758 (5)	17,227 7—562,977 7	

Probable distance, 1136 miles, . . . \$5,398,516 2

Probable cost per mile, \$4,752.

ESTIMATE OF THE MIDDLE ROAD.

	miles.	per mile.	No.	
Roads	316 3-8	\$2,240 (6)	\$706,440	
Do.	745 5-8	4,854 (7)	3,619,263 7—4,325,703 7	
Bridges	5 7-8	211,200 (8)	1,240,800	1,240,800
Causeways	36½	10,865 (9)	396,572 5	
Do.	2 5-8	13,229 (10)	34,726 1—431,298 6	

Probable distance, 1106 miles, . . . \$5,997,802 3

Probable cost per mile, \$5,423.

ESTIMATE OF THE WESTERN ROAD.

	miles.	per mile.	No.	
Road	328½	\$1,900 (11)	\$623,675	
Do.	778½	4,200 (12)	3,270,750—3,894,425	
Bridges	3½	176,000 (13)	572,000	572,000
Causeways	28½	9,700 (14)	276,621	
Do.	1½	11,676 (15)	14,595—291,216	

Probable distance, 1140 miles, . . . \$4,757,641

Probable cost per mile, \$4,173.

STEAMBOAT PIONEER.

We learn from the Gazette, "that the Captain of this boat has just returned, after a most successful voyage on the west branch of the Susquehanna. The boat ascended as high as Big island, which is about sixty-five miles above Northumberland, and only fifteen miles from where the river passes through the Alleghany ridge. The boat was accompanied during her voyage by a committee of five of the most distinguished men of the country, who are preparing a report, which we expect to receive in a day or two, and which, together with a detailed account from the Captain, it will give us pleasure to lay before our readers. We understand that the system pursued in navigating this boat, is the one which the proprietor has steadily adhered to, of never attempting the rapids or falls by the mere force of steam, believing it better to use other means of ascending particular places, than to incur risk to the whole enterprise by endeavouring to surmount them by the power of the engine alone." [Balt. Pat.

THE FARMER.

BALTIMORE, FRIDAY, MAY 19, 1826.

MARYLAND AGRICULTURAL SOCIETY.

¶ All Editors of papers will oblige the Maryland Agricultural Society, and promote the cause of the plough, by giving place to the following items.

The next Cattle Show and Exhibition of Domestic Manufactures, will be held at the Maryland Tavern, as heretofore, on Thursday and Friday, first and second days of June next.

All persons who wish to witness the exhibition, and to have the privilege of the grounds, and to promote the objects of the society, may be furnished with a ticket of admission, at the Gate, for \$1 only.

All persons, whether members of the Society, or not, who possess fine animals of any kind, are requested to exhibit them in the Society's pens, even though they may not choose to contend for the premiums. Fine animals may be placed in the pens, and after the exhibition, at 3 o'clock, P. M. on each day, may be exposed to public sale, without expense to the owner.

To contend for a premium of any kind, it will be necessary that the party should give notice to J. S. Skinner, of the city of Baltimore, at some time before 8 o'clock, on the first day of June. *The sooner notice is given the better!*

All articles of Household Manufacture must be exhibited on the first day of the show.

A place will be provided for the exhibition of Machinery and Implements of Husbandry.

Butter and Fermented Liquors will be delivered to the Trustees early on the first day, under a private mark or seal, and the names of the successful candidates only will be disclosed.

The owners of Stock are requested to furnish placards to be fixed on the pens, giving, as far as practicable, the pedigree of their animals, and any other information in their possession.

The Trustees will be on the ground at 8 o'clock, A. M. on each day. On the first day they will see that the stock are all in their proper pens, and other objects offered for premium properly arranged.

At 9 o'clock they will meet at their Hall, and the Society be assembled; when the Judges will be announced by the President, who will deliver to the chairman of each Committee a paper of instructions, a list of his Committee, their badges, and a list of the objects to which their attention will be called.

The Judges will then proceed to the discharge of their several duties.

At 3 o'clock, P. M. the Public Sale will commence.

On the second day, at 9 o'clock, A. M. the Ploughing Match will commence.

From 9 to 11, the polls will be open for the election of officers for the ensuing year. The ballots to be counted after dinner.

At 12 o'clock the Trustees will meet to receive the Reports of the Judges.

At 1 o'clock the Society will assemble. The Chairmen of the several Committees will be called on in the order of publication, to read their Reports, and the premiums will be distributed by the President.

At 3 o'clock the sale will be resumed.

Volunteer Premium.—To the owner of the Ram, which, being shorn upon the ground, shall yield the greatest weight of picklock wool, the condition of he fleece as to cleanliness being taken into consideration, will be awarded a silver cup, valued at \$20—By Jose Sylvester Rebello, minister from Brazil.

Persons wishing to have a handbill of the Exhibition, will call at the office of the American Farmer.

The Trustees earnestly hope that there will be an excellent market for all kinds of produce.

Complement to the husband and wife.

and from the city of Baltimore.

and from the city of Baltimore.

and from the city of Baltimore.

A full bred Devon Bull, nine months old.

A full bred Devon Bull, ten weeks old.

A half bred Devon Heifer, 2½ years old, with a 3 Devon Bull Calf by Garrick, 6 months old.

A half bred Bull Calf by Garrick, out of the Dun prize Cow, 8 days old and uncommonly fine.

An imported Heifer, by Mr. Champion's celebrated Short Horn Bull *Aid de Camp*; she has been lately bulled by Col. Powel's imported Bull, Malcolm.

—The Editor is requested to say that CROPS will be answered.

—Any gentleman, who will give a recipe for curing the murrain in cattle, will oblige the Editor and many subscribers.

BLOODED COLT FOR SALE.

Will be offered for sale, on the 1st of June, at the Cattle Show, a blooded Colt sired by Tuckahoe. He is allowed by the best judges to be a very superb animal; is a light chestnut sorrel, upwards of 16½ hands high, and will be three years old in July next.
May 17, 1826.

BLOODED HORSES FOR SALE.

YOUNG GRACCHUS, three years old in June next—a bright bay, upwards of 15½ hands high; black mane and tail. The following extract of a letter, from one of the first judges of horses, will furnish those disposed to buy with correct information as to the appearance and blood of this colt.

"I think him a very fine young horse. He is a horse of the purest blood; the pedigree of his sire, Gracchus, is well known. He was by Old Diomed, his dam by Chanticleer, &c. The dam of your colt by the imported horse Magic, which was by Volunteer, (the sire of Spread Eagle;) his dam Marcella by Mambrino, (the sire of Messenger;) his grandam Medea, which was by Sweet Briar; his great grandam Angelica by Snap, Regulus, Bartlett's Childers; the grandam of your colt by Fox," &c.

Also, the DAM of the above colt, ten years old; a bright bay and large—and her horse COLT, two weeks old, by Cornwallis; Cornwallis by Florizel; his dam out of Dr. Edelen's celebrated running mare Floretta.

For a reference to the owner, apply to the Editor.
May 17, 1826.

GREEN HOUSE PLANTS, SHRUBS, AND FRUIT TREES.

A considerable variety of valuable PLANTS, and in high order, are for sale at the Green-house of the subscriber, on Jamaica Plains, in Roxbury, by applying to the Gardener. Also, Roots and Flowering SHRUBS and TREES, and a few thousand of the Newcastle Cockspur Thorn, which is the only sort with me, that has not as yet been attacked by the borer, and are three years old. The proprietor is also bringing forward a Nursery of Fruit Trees, every Tree of which is from seed and not suckers, and will be so warranted; some hundreds, of superior sorts of Apple Trees, are now large enough for removal, other sorts will not be fit for a year or two. A few large white Dutch Currants, and English Gooseberries.

Roxbury, April 14, 1826.

JOHN PRINCE.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8			
BACON, and Hams, . .	lb.	5	7½	9	12
BEEF-WAX, Am. yellow	—	33			50
COFFEE, Java,	—	17	18	22	25
Havana,	—	18	18½		20
COTTON, Louisiana, &c.	—	14	15		
Georgia Upland, . . .	—	12	12½		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	11			12½
CHEESE,	—	8	10	12	15
FEATHERS, Live, . . .	—	31	32	37	
FISH, Herrings, Sus.	bbl.	2 12½	2 26		
Shad, trimmed, . . .	—	7 00			
FLAXSEED, Rough, . .	oush	75		87½	
FLOUR, Superfine, city,	bbl.	4		5 00	6 00
Fine,	—	3 75	4 50		
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	67	70		
Wheat, Family Flour,	—	85	90		
do. Lawler,	—	50	70		
do. Red,	—	80	82		
Rye,	—	65	66		
Barley,	—	80			
Clover Seed, Red . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	2 25		3 00	
Oats,	—	46	47	50	
Beans White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	24		37	
HOGS' LARD,	—	7	8		
LEAD, Pig	lb.	6½			
Bar	—	8	8½		
LEATHER, Seal, best,	—	23	24	62	
MOLASSES, sugar-house	gal.	45		62½	75
Havana, 1st qual. . .	—	28	28½	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 25			
Pitch,	—	2 25			
Turpentine, Soft, . .	—	1 50			
OIL, Whale, common, .	gal.	30	31	40	
Spermaceti, winter .	—	70		88	
PORK, Baltimore Mess,	bbl.	11 00	12 00		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	4 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	7½	8	12
WHISKEY, 1st proof, .	gal.	29½	30½	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	96		50	
SUGARS, Havana White,	c. lb.	13 50		15	16
do. Brown,	—	9 00	9 50		
Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	
SPICES, Clove,	—	70	75	1 00	
Ginger,	—	7		12	
Pepper,	—	17		25	
SALT, St.	bush	43	45		
Liverpool Blow, . . .	—	45	46	75	
SHOT, Balt. all s . .	cwt.	2 00			
WINES, Madeira . . .	gal.	2 50	3 00	3 50	
do.	—	2		2 00	
List,	—			1 50	
Clare	doz.	8		5 00	
Port,	gal	20		2 50	
WOOL, Merino, fu . .	—	20			
do. crosset	—	10			
Common, Country, .	—	3			
Skippers'	—	20			

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AGRICULTURE.

WOOL.

[In the last volume of the American Farmer, notice was given that we had sent to manufacturers in the Eastern states, for their opinion of their relative fineness and value, some samples of fine wool from the flock of Mr. John McDowell, Jr. near Steubenville, Ohio, together with some from the backs of as many of the high priced Saxony sheep which were sold at Brighton, on the 14th July, 1825, without giving any clue whereby they should distinguish the domestic samples from those of foreign growth. Mr. McDowell's flock, it will be recollected, is derived from that of Mr. W. R. Dickinson. His samples were lettered D, E, F, and those from the imported Saxony sheep were numbered 1, 2, 3. One of the letters received in answer to our inquiries, is subjoined; and when it is seen to be from Mr. James Shepherd, the proprietor of the celebrated manufactory at Northampton, it will inspire the confidence which is due to his known judgment and experience, and will be found, moreover, to contain some valuable and very striking practical suggestions as to the connection between the weight and the value of a fleece, and on both as connected with the condition of the sheep. The experience of Mr. Shepherd will remind the reader of the remark of Dr. Parry, that "a sheep which is fat, has usually comparatively coarse wool; and one which is lean, either from want of food or disease, has the finest wool; and the very same sheep may, at different times, according to these circumstances, have fleeces of all the intermediate qualities from extreme fineness to comparative coarseness."]

J. S. SKINNER, Esq., Northampton, Jan. 4, 1826.

Sir,—Your letter of the 30th of last month, I have received, covering six samples of fine wool, requesting me to determine their relative value. For me to do that correctly, it would be necessary for me to consider each lock as from a pile of assorted wool; for to estimate the value of wool in the fleece, it is necessary, if there be a number of fleeces, to examine them one by one, and estimate upon an average; but if it be a single fleece, then three samples taken from the fleece would answer—one from the shoulder, one from the side, and one from the flank. In the samples of the wool sent, there is twenty-five per cent. difference in cleanliness, in favour of letters D, E, and F, the value of which I shall estimate as follows, (calling each sample as from a fleece well washed upon the sheep, and of general uniformity.) Letter D, 100 cents; E, 90 cents; F, 70 cents. Nos. 1, 2, and 3, I shall also estimate in the same manner, after making allowance for its unusual length of staple, which I presume is owing to its being over a twelve-months' growth, which, if otherwise, would be against its value.

No. 3, 90 cents; No. 2, 75 cents; and No. 1, 60 cents—which last appears to be from two different parts of the fleece, and one of them from the flank. The samples No. 1, 2, and 3, I should judge to be from imported Saxon sheep; but they are by no means the first rate samples, as I will show you by samples enclosed, from my own full blood Saxon sheep. I have also enclosed samples from half and three-quarter blood Saxon sheep, and full blood Spanish, upon which the Saxons have been crossed. It ought to be remembered that the raising of superior bucks, for improving our breed of fine sheep, is not unlike that of raising a superior stud for the improvement of that most valuable animal the horse, as the number of either of the animals is small that are valuable for improving their breeds. To obtain the most perfect sheep, is in the first place to have its wool of the finest kind and short staple; next to that is the uniformity of its fleece,

and to have a fine uniform fleece, and a good form. The form and size of the animal is important; but to have a sheep with a muffled face and head, and the legs covered with wool, is of no importance—for the manufacturer does not wish for the wool that grows upon the head or legs; but that which grows on the body is the most desirable: hence it is that the animal with a clean velvet face and legs, a long and large body, with short and fine wool on the flanks, is the most valuable; and when obtained, can never fail of commanding a price. Out of the many sheep that I have raised, I have only one of that character, for which \$250 has been offered without effecting a purchase. I have also a full blood Saxon buck and ewe, the samples of which you have enclosed, (Nos. 22 and 121,) which I value highly for their fineness and uniformity. And here I would remark, and refer to the samples, that no buck of the same quality and over one year old, will ever give so fine a fleece as a ewe of equal quality from one to six years old, unless the ewe be without lamb and fat; for all sheep give coarser fleeces in proportion to their condition; and I estimate the fleece of a ewe in good order, weighing three pounds, as much value as that of one in high order, weighing four pounds. All sheep require to be kept in good order, and a flock of ewes from three years and upwards will then yield, upon an average, three pounds each of clean washed wool; and wethers of the same age and condition will shear four pounds each; and any advance in weight beyond that, (in my opinion,) tends to diminish the value of the wool in about the same proportion as the weight is increased. Hence it is, that I value the fleeces of three pounds as much as the one from a fat ewe weighing four pounds, and even more; and from the above remarks, I wish to be understood, that any attempts to increase the value of the shearing of a flock by over-feeding, must fail in the estimation of all manufacturers that understand their business. The keeping of sheep fat not only increases the size and length of the staple of wool, but it increases the oil and yolk of the animal, which greatly increases the weight of the wool, oil, &c. without adding to its value.

Yours, with respect, JAMES SHEPHERD.

SHEEP.

White Post, Frederick county, Va. Feb. 18, 1826.

MR. SKINNER,

Dear Sir,—I have been induced by the gratifying perusal of several papers in the late Nos. of the American Farmer, on my favourite subject, to offer you a few remarks, more with a view of eliciting further information, than an expectation of throwing much light on it—very pleasing it is to perceive that we are now in a fair way, (since our distinguished champion in the cattle line, has extended his skill and liberality, zeal and science, towards sheep also*) to benefit by the introduction of some of the best breeds in Europe, discriminated by their different forms and traits of character, adapted to, and further introducing a greater variety of useful manufactures. However important, it is acknowledged to be, to give a general attention to our farm stock, it is perhaps particularly so, in relation to cattle and sheep, uniting as they do, a greater number of valuable qualities, consequently, requiring a greater degree of skill to bring them to perfection. It is notorious that the subject of sheep and wool is better understood in the island of Great Britain, than in any other portion of the globe, and perhaps there is but little room left there for improvement. We have reason to anticipate in our own country, where the soil and climate is at least as congenial to the attainment of size, and more so to their health and fineness of wool, greater results with the same care and

attention. It may be by some, thought presumptuous in us to doubt the correctness of theories advanced by distinguished and successful English breeders, but when we recollect that none of us are exempt from error, prejudices, and local attachments, &c. it is but reasonable we should expect some benefit to result from an attempt to investigate what we do not understand. Under such impressions, I would respectfully invite the attention of some of our eastern breeders and manufacturers, whose experience would enable them to throw some light on the following opinion of Doctor Parry's, to be found in the American Farmer of January 20th, page 1st.

Diseased Sheep have finer fleeces than healthy ones.

"A sheep which is fat, has usually comparatively coarse wool; and one which is lean, either from want of food or disease, has the finest wool; and the very same sheep may, at different times, according to these circumstances, have fleeces of all the intermediate qualities from extreme fineness to comparative coarseness."

This surely is a subject worthy of serious investigation, inasmuch as fine wool is becoming every day more valuable to the farmer, and must be produced in its greatest perfection, to enable the American manufacturer to equal or excel the foreign—such inquiries are highly interesting to the curious and philosophic, and may be not a little important in determining the adoption of that medium mode, in pains taking, most rationally calculated to advance the interest of the wool grower. If it could be proved to be a fact, that poor sheep produce finer wool than well fed ones (diseased ones must be considered entirely out of the question) in addition to the higher price, it might be urged that a greater number can be kept on the acre of grass land, and on a scale of more economy throughout their management, with the greater product of fine wool. I for one, shall be unwilling to admit this theory until better informed on the subject.

It is an important inquiry what fine wool is, what properties constitute such wool as is most in demand for the fabrication of broad cloth of the first quality—is it such a fibre as would be pronounced by the naked eye, or with the aid of a glass to have the least circumference without reference to other circumstances; or is it that which, although having a greater apparent coarseness, unites in a greater degree, tenacity, strength, pliability, &c. such properties, in short, as have usually been supposed to proceed from an animal capable of affording a due degree of oil—is not the fibre tuberosous and requiring a certain and uniform degree of animal grease to promote its extension and growth? We are young it is true in the philosophy of wool, and it is presumable there are still many facts hidden, and entirely unknown to us, which appear incredible on their first development—but there is an apparent inconsistency in the assertions of Dr. Parry, that Spanish merinoes have been improved in their wool by British crosses, when an opinion is at the same time advanced, that diseased and poor sheep have finer wool than healthy and well fed ones. We know that British sheep are remarkable for size and fat, fine form, &c.—but not for their fineness of wool, and if Spanish merinoes have been improved in this particular, is it not presumable they could not have been of the best kind, of which we know there are considerable varieties—and of the most select British breeds—further is it not natural to suppose that the British sheep imparted to the Spanish, size, constitution and fat, which could not have the effect of ameliorating the wool according to Dr. Parry's own theory. I have not the Doctor's writings to resort to, perhaps there might be found in them a satisfactory explanation—my object is not criticism, but to invite discussion from the informed and experienced on a subject of

* Alluding to Col. Powell.—Ed. AM. FARM.

save the whole cost. Cheap things at first, are not always cheap in the end. I shall erect one next month, unless I hear of some better plan.

Your constant reader, CINCINNATUS.

ON DISEASES AND ACCIDENTS OF FARMERS.

Observations on the means of preventing and relieving the accidents and diseases, to which farmers are particularly subject. By JAMES MEASE, M. D.

[From the Memoirs of the Philadelphia Society for promoting Agriculture—Read May, June, July, August, 1825.]

[Concluded from p. 65.]

LIGHTNING.

During a thunder storm, while at home, collect the family in a close room having no fire place: no instance having fallen within the knowledge of an inquirer on the subject, of a person being killed in a close room.*

Persons struck with lightning are to be stripped, and have cold water dashed on their bodies, and sprinkled in their face. Friction with coarse cloths is to be applied, every time after the use of the water.

It is singular, that few farmers when they build a house or barn, will incur a little additional expense for a lightning rod to preserve them from destruction: of those which are erected in town or country, very few are properly constructed. For this reason, the following directions by the author, are here inserted from the Agricultural Almanac of Philadelphia, for the year 1825:

1. The rod should be made of iron, and it will be the better for being round and smooth; the several pieces composing it must be neatly welded together, and the top formed into a moderate point, and tinned, to prevent rust, which destroys the conducting power of iron. Where the tinning cannot be done, coat the point with black lead; and as this will be washed off in time, it must be renewed when necessary. It is still better to make the point of the metal called platina, as that will not rust, and requires no further attention when once fixed.†

2. For a dwelling house, the rod should run up the side or end, so as to project four or five feet, at least, above the chimney, because the heated and moist smoky vapour in the tunnel of a chimney, having a fire on the hearth, will act as a conductor to the electrical fluid. To show the importance of this caution, it may be mentioned, that most of the accounts annually published, state the circumstance of lightning passing down chimneys into houses: and the chimney of a house at Purfleet in England was struck, although a rod was affixed to another part of it. In a building without a chimney, the rod should be placed on the west side, in preference, because thunder storms commonly come from that quarter.

3. The rod is to be fastened to the wall by iron clamps or staples; and the lower end of the rod should enter a stream of water, or the earth two or three feet; then go six feet from the wall, and then be bent downwards three or four feet, to prevent damage to the foundation. Where a house is about to be built, the rod ought to be the first thing prepared, as it can be easily inserted in the ground (when the cellar is dug,) to a depth to insure its reaching moist earth; a point of essential importance to insure a speedy dispersion of the electrical fluid. It will not answer to let the end of the rod merely touch the top of the ground, nor to let it

rest on a rock, even although it should be a foot or two under the surface, because in neither case will the electrical fluid be certainly carried off. Houses thus partially protected, have been injured by lightning. About three years since a place of worship in Massachusetts was struck, that had a conductor just touching the ground, and Mr. Thomas Leiper's house at Crum Creek was shattered, several years since, notwithstanding he had two conductors to the house, both of which rested on rocks a few feet under ground.

4. The lower end of the rod ought to be coated with a paste of black lead,* to prevent rust, and also be surrounded by a bushel or two, if possible, of charcoal, coarsely pounded and moistened.

5. There must be two conductors to a building when it is more than 40 feet long; one at each end, and these ought to be firmly connected by a rod, or strip of lead, lying on the roof; because the quantity of electrical fluid in the cloud passing over one end of a building, may be greater than the rod there can carry off; and hence the redundant portion will spend its force on the house; whereas, if there are two rods connected, the lightning will be divided between them, and the house be saved. Besides, if there be only one rod, the charged cloud may pass over that end of a long building to which no rod is attached, and there cause havoc; such cases have happened. The house at Purfleet was struck, although a rod was attached to the ridge, only forty-six feet distant from the corner where the lightning spent its force; and a few years since, near Philadelphia, one end of a tanner's frame bark house, 70 feet long, and having a rod at the other end, was also struck and the house consumed.

6. Additional security would be obtained by having the water spouts made of copper, and by forming a communication between them and the rods, carrying an iron or copper rod from the lower end of the spouts to moist earth, or into water.

Danger from Exposure to Cold.—A carelessness with respect to this cause of disease, has often produced serious acute illness, or laid the foundation for tedious chronic complaints. Many persons have an impression, that such exposure is necessary, and particularly praiseworthy in young persons, to render them hardy; and a reference is sometimes made to the Indians, who dress lightly in winter, to prove the harmlessness of cold; but those who use this argument should reflect on the difference between the original stamina of savages, their manners and habits, and uniformity of life, and those of civilized society. To be consistent, and to give the argument weight, they should imitate the savages in all things regarding their modes of life; but as this attempt would be impracticable, we must cease to quote them, and act agreeably to the constitutions we have acquired, and to the circumstances in which we are placed. Let persons, therefore, in civilized life, however hardy they may be, guard against the effects of severe cold; and if unfortunately exposed thereto, let them as soon as possible prevent the effects of it. When, after such exposure, a limb, or any part feels numb, it should be rubbed with snow, or immersed or washed in cold water, which will cause a gradual return of vital heat to the part. Avoid approaching the fire, or remaining in a warm room for some hours; for either an inflammation of the part, or severe rheumatism will be the consequence. The application of the simple remedy of the fat of poultry, has been found highly beneficial as a local application, and after the use of cold water or snow, should not be neglected.

A head-ache should never be trifled with; in

young persons it is the first symptom of a violent fever, and in those beyond the middle stage of life it is the precursor of apoplexy, and its common attendant, palsy. Timely and sufficient evacuation of the bowels, the loss of blood, proportioned to the vigour of the patient, and force of the pain, together with rigid abstinence and quiet, will often prevent both complaints.

From motives of economy, animals that have died of malignant diseases, are often skinned before they are buried. The act is attended with so much danger, that it ought not to be attempted. Several cases have occurred in the United States, of death from this cause, owing to the absorption of the acrimonious humours of the dead animal by the person engaged in the operation. The danger is greatly increased, if the fingers or hand be scratched or cut while covered with the moisture of the dead animal. An account of some deaths from this cause has recently been published,* and many more are on record. In case of a wound, scratch, or prick, from either a bone or knife, being received, however small, by a person while skinning or dissecting a dead animal, the part ought to be instantly well washed with ley of ashes, or with soap and water, then sucked for a minute or two, and a string tied above the part, as long as it can be borne. If the hand be in pain, apply pledgets of lint dipped in laudanum and lead water, to the wound, and as far up the arm as the pain extends. Should matter form, no time is to be lost in giving vent to it by the knife, to prevent the injury which will follow its confinement. Keep the hand in a sling, and give opium to procure sleep and diminish pain and constitutional irritation. As great debility will take place, the strength must be supported by wine, and porter, or ale. The bowels must however be opened by a dose of calomel and jalap, or rhubarb.

Mill ponds and low swampy places near a house, have often produced fevers of a malignant cast, or bilious remittent fevers, which have proved fatal. Intermittent fevers of an obstinate character, have arisen from the same cause, and by producing obstructions in the liver and spleen, have proved extensive sources of permanent ill health. The wet places should be drained, late in the autumn, or during the winter. Many mill ponds might be dispensed with, by the use of horse power to grind grain for family use; and a small steam engine would obviate the necessity of overflowing many acres of land, to obtain a water power. The expense of erecting one has now ceased to be an objection. The right to make a dam by drowning an extensive surface of land, is a just subject for legislative interference, and as in the case of the erection of a bridge, or laying out a road, ought to be decided upon by the local authorities, to whom such measures are usually referred.

In clearing wet land, it is of great importance to drain and dry it thoroughly, before the trees are cut down, as the inevitable consequence of an exposure of the wet soil to the action of the sun, will be the production of highly noxious effluvia, followed by fevers or dysentery.

Care should be taken to prevent exhalations of decaying vegetable substances, in and about the house. In Virginia, a mortal fever was occasioned,

* Dr. Kercheval, of Bairdstown, Kentucky, relates the history of a disease that was propagated among a number of persons who had flayed some cattle, which had died of a disease attended with inflammatory swellings, ending in gangrene. See Med. Recorder, vol. 4. Mr. Huzard, inspector of the French veterinary schools, observes, that no carcases putrify so quickly, and emit such dangerous exhalations, as those of herbivorous animals, as the horse, the ox, &c. He has seen numerous fatal instances of this poison among the veterinary students, when they happen to wound themselves in dissecting these animals.

* This fact was first stated to the Boston Academy of Sciences, by the ingenious Benjamin Dearborn, of Boston, in the year 1807.

† These points are made and kept for sale by Isaiah Lukens, of Philadelphia.

* This may be done by powdering the black lead, mixing it with melted sulphur, and then applying it to the rod while hot, as recommended by Mr. R. Patterson, late President of the American Philosophical Society.

a few years since, by exposing to the sun, a quantity of cedar or cypress shingles, which had been stored for some years in the cellar of the dwelling house; and a similar fever was more recently produced in Delaware county, Pennsylvania, from the decaying timbers and putrid water in the cellar of an outhouse.*

Accidents and complaints, apparently of a trifling nature, often prove very serious in the end, and sources of great suffering. As in war, "discretion" is often "the better part of valour," so in the human system, a little attention to a small injury, may prevent a great evil. Knowing the disposition of many to neglect themselves, from an absurd notion of not appearing effeminate, and of a manliness of character being shewn, by this inattention to small injuries, I am induced to notice the subject.

More than half the deaths from consumptions, proceed from neglected catarrhs, or as they are commonly called, colds. Neglected felons or whitlows, and fear of a little acute temporary pain from an incision, which may be necessary to cure that complaint, cause weeks of suffering, and often the loss of a joint. Cases of lockjaw and gangrene, have proceeded from cutting a corn on the toe: and eighteen months confinement, with great pain, from permitting the nail of the great toe to grow down into the flesh. Sir Astley Cooper relates the case of one death from cutting a toe nail to the quick; and another from puncturing a bunion on the toe with a lancet: gangrene took place in both instances. Lockjaw from running a thorn or nail in the hand or foot, has already been treated of. A neglected inflammation in the eye, has often ended in a film over the pupil, or in a cataract. Other cases could be quoted, but enough has been said to show the propriety of the advice given.

Some cautions on the subject of family medicines must be given. No medicine should be kept in open drawers, or in closets used for the purposes of the family, for fear of their being swallowed by children, but exclusively in a box or drawer having a lock and key. This advice is founded upon a knowledge of such accidents having happened. Nor should any medicine be kept, without its name being marked in plain English characters. The remains of unknown compound medicines, when partially used, should be thrown away. Laudanum must be given in a bright state; for when thick, the dose is doubled or trebled from the solid opium suspended in the liquid, and the deaths of children have been caused by the use of such turbid laudanum.

Bites of Snakes, additional, (see p. 00.)—While this sheet was at press, I met with another record of the efficacy of the liquor of ammonia, (spirit of hartshorn,) in the case of a child, apparently near dying, by Mr. Burchell, while travelling in South Africa. Ten drops were given in water, every five minutes, until relieved. The medicine was also applied to the wound after being scarified, with his penknife. In the year 1822, the uniform success of the external and internal use of the same remedy, during eighteen years was stated in the papers, on the authority of Gibson Port, Mississippi, and before that I had seen several years since.

COTTON TRADE.

Sir, South Carolina, May 7, 1826.

Whether my lucubrations on the cotton trade last year, and the folly of persisting in such an increased growth of it, had the effect of cautioning any of your cotton-subscribers, or not, I am alike indifferent and ignorant. So far from there being "not a bale" at Liverpool, as a letter from thence, inserted in a Philadelphia paper, modestly predicted would be the case, I believe my calculations as to the result on 1st Jan. were much more correct: recent accounts tell us that the great powers are about to interfere in the business of Greece. Whether the report in the London Times be correct or not, is of little consequence. The fact of the submission of the Greeks, almost wholly, if not quite so, depending on a single province, (Egypt,) is sufficient to enable us to determine that, without the interference of the great powers, the contest is fast approaching its close. This is the last campaign of Ibrahim, or any other pacha. Now, should this be the case, not only Greece, but in fact the whole of the Mediterranean, will become rivals in the cotton market, more especially in the dominions of France, and thus fill up the room that would otherwise have been occupied by the cotton of the Western world. The Anglo American letter writers from Liverpool, may tell us of the quality of the cotton, and call us to judge of it by that of Egypt. Who does not remember the stories about East India cotton? Look at the price it bears now, and what it did ten years since. Intelligent writers say, that Greece in 1809 produced for export as much cotton, at \$40 per bag, as would amount to 109,000 bags.

However, I have no wish to intrude my present sentiments, or to vaunt my past prophecies—all I would attempt, is to call the attention of the farmer to his own well doing, and I think I cannot better do this than by the following statement as to the crop that will probably be exported this year:

1. Ports in the Gulf of Mexico, in 1824-5, shipped	Bales. 256,000
Add increase, 20 per cent	51,200—307,200

The Carolinas, Georgia, & Virginia in 1824-5, ship't	313,248
Add increase of 40 per cent	128,280—441,528

Making a total crop of	748,728
Deduct for home consumption,	100,000

Leaving for exportation,	648,728
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2. Ports in the Gulf of Mexico, in 1824-5, shipped	256,000
Increase of 33 per cent,	85,333—341,333

The Carolinas, Georgia, & Virginia, in 1824-5, ship't	313,248
Increase of 25 per cent	78,277—391,525

Making a full total crop	748,728
Deduct for home consumption,	100,000

Leaving for exportation,	648,728
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3. Ports in the Gulf of Mexico, in 1824-5, shipped	256,000
Increase of 33 per cent,	85,333—341,333

The Carolinas, Georgia, & Virginia, in 1824-5, ship't	313,248
Increase of 25 per cent	78,277—391,525

Making a full total crop	748,728
Deduct for home consumption,	100,000

4. Ports in the Gulf of Mexico, in 1824-5, shipped

ico,	341,333
Virginia, N. Carolina, &c.	50,000
S. Car. & Geo.,	263,428
Increase 25 p. ct.	65,857—329,300

Making a total crop of	720,633
Deduct for home consumption,	100,000

Leaving for exportation,	620,633
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Total,	2,545,049
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Will produce an average (for the year,) of	636,262
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Being an increase over 1824-5, of	67,014
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Increase of 1824-5 over 1823-4, was	69,091
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Export of 1824-5, was	569,248
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These calculations are candidly submitted to all those planters who last year flattered themselves that cotton at 20 cents was good for two or three years, and have comparatively abandoned the growth of corn—as well as those who went boldly into debt, and who are now paying either 90 cents in the ports for heated corn, or \$1.25 for sound grain. I will conclude this paper in the words of Lord Burleigh—

"Live not in the country without corn and cattle about thee. For him that putteth his hand to his purse for every expense of household, is like him that putteth water into a sieve. Keep rather two (servants,) too few than one too many. Feed them well, and then thou mayest boldly require service at their hands."

AMPHICON.

P. S. I have calculated on a crop of only 567,000 bales—the amount stated in the New York American. To this should be added all that never passed a custom house, and was consumed at home. So that the produce of 1823-4, could scarcely be less than 650,000 bales.

CAMBLET WOOLED SHEEP.

Interesting to Farmers.—We have seen this morning a lamb, from a stock originally of Caraman, in Asia Minor, called the camblet woolled sheep, only three months and a half old, with wool from three to five inches in length covering his whole body. We are no judges of sheep and wool, but we are told by those who are, that this breed is well worthy of the attention of farmers. The lamb belongs to William Shotwell, and is to be seen in the yard of the Dutch church, corner of Nassau and Liberty-streets. There is also a full description of the animal with a drawing of him, left at this office.

[N. York paper.]

WOOL.

Wool is at this moment the most important, and we believe the most profitable object of the landholders' and the husbandman's care. When imports for the protection of the manufacturer, are indirectly forced upon the products of the industry of nine-tenths of the population, it is astonishing that the landholders and cultivators of the eastern, middle, and western states, have not been brought to strenuously improve their resources, by the production of a commodity which the manufacturer require, which their own necessities need, and which of all others, can be obtained most readily, most cheaply, and can be transported, or can be retained for a market, with little chance of deterioration and comparatively at very little cost.

and comparatively at very little cost.

ing a greater portion of the year, they require very little attention, and very slight expense for food. Of all flesh theirs is the most nutritious; of all animals, embraced by the term live-stock, excepting swine, they are the most prolific; and of them all, they are the most easily transported. Yet we find our markets not well supplied with the *finest* kinds of mutton, and our warehouses stored with *foreign* wool. [Dem. Press.]

PROSPECT OF CROPS.

Extract of a letter to the Editor, dated "Queenstown, May 16, 1826."

"The present season has been very favourable for our wheat crops, which look well, where the seed was perfect and the fly did not destroy it in the fall; though we are now beginning to feel sensibly the want of rain, and since the last few very warm days the fly is making considerable ravages in the later wheat, particularly on the light thin lands. I regret to inform you that we shall have very little fruit on this shore, which is generally of so choice a quality. Almost entire destruction by the latter frosts."

Respectfully, your obed't serv't,
WM. H. TILGHMAN.

Sir, Red House, N. C., May 18, 1826.

"We never have experienced such a dry spring, within the recollection of the oldest men. In this county the wheat crop is very promising, but in the adjoining counties it will not be worth cutting."

HORTICULTURE.

ON THE CULTURE OF THE GRAPE VINE AND THE MAKING OF WINE,

By Thomas McCall, Esq. of Laurens county, Geo.
(Continued from p. 70.)

THE VINTAGE.

In making wine, I recommend, partly, on my own experience, and generally, after L. de St. Pierre, the following practice.

When the grapes are fully ripe, cut the footstalks of the bunches close to the bunch, and lay them in baskets without bruising; and when the baskets are heaped, convey them to a table near the vats and press; let all green and defective berries be carefully picked off from the bunches, and the fruit on the stems mashed into a vat. Every basket of ripe grapes will yield something more than three gallons of juice, if the grapes are gathered in wet weather, or in the morning before the dew is dry; but, if gathered in dry weather, and toward the middle of the day, less than three gallons may be expected—the juice heavier, and will make the best wine.

When the grapes are mashed in the vat, fill a quart or half gallon measure with the juice, and put the hydrometer to float in it, and note the degree to which it rises: if it rise to the 8th, or 8.5th degree, add 5lbs. of dry brown sugar to every basket of grapes in the vat, and stir it well to dissolve, and after pressing, the must will probably raise the hydrometer to 16 deg.; this, however, depends on the dryness or dampness of the sugar: if the hydrometer in the juice rises 10 degrees, add 4 lbs. of sugar per basket, and after pressure, the instrument will probably rise to near the 16th degree: if the instrument does not rise to 16 degrees, add more sugar, and regulate the strength as may be desired.

When the grapes are mashed in the vat, the temperature of the must will be from 3 to 7 degrees colder than the atmosphere in the shade; and when the wine is in full fermentation, the temperature will be from 10 to 20 degrees warmer than the atmosphere: when the fermentation subsides, the heat

is lessened, and again becomes colder than the atmosphere.

When the wine is pressed, and turned of the strength of 16 deg. specific gravity 1.123, or nearly 12, and half per cent. heavier than water, the heat and fermentation causes the weight to decrease; and when the fermentation is over and the wine has become clear and fit to draw off from the lees, the hydrometer sinks one degree deeper than 0 (zero) specific gravity 0.993, which shews that the loss of weight by fermentation, is 17 degrees, or 13 per cent.—the wine lighter than the must. The insensible fermentation goes on, and the wine decreases in weight for three or four years, or, until the residual saccharum is exhausted in spirit, and the residual leaven is exhausted, and subsides in lees: at this stage the wine is said to be dry, and will improve no more.

Fermentation.—When the grapes are mashed into the vat, the juice being colder than the atmosphere, absorbs its heat, and perhaps, its oxygen, which causes the fluid to expand and fermentation begins. The fermentation is insensible at first; but in a short time, air bubbles begin to ascend to the surface, which contain carbonic acid gas, and shew that the spirit has begun to be generated from the sugar: the spirit reacting on the skins of the grape, changes the colour of the wine toward that of the ripe grape; and, also, reacting on the stems of the grape, the wine obtains the tannin, for condiment, and for durability: when these are enough, which can only be judged by the appearance and taste being agreeable, the wine is drawn off from the vat, strained through a sieve to separate the skins and seeds of the grape, and the marc is subjected to the action of the press. When the must is only 14 degrees of strength, four or five hours in the vat will be long enough, if the weather is warm and dry; but if the must is of 16 degrees, seven or eight hours in the vat, in warm weather, may not be too long; if the weather is cool or rainy, ten or twelve hours, or even a whole night will not be too long: if wine is fermented too long in the vat, it acquires a husky taste, and is never agreeable, although it will keep for a long time.

Wine that is drawn from the vat, is called unpressed wine, and is the heaviest and least coloured: wine that flows from the press, is called pressed wine, and is lighter and more coloured than the former: after the wine ceases to flow, the press is raised, and the marc or cheese being cut up with a sharp spade, and stirred, is again pressed, and that which flows is called wine of the first cutting—the marc is again cut and mixed, and the wine that flows is called wine of the second cutting—the marc is again cut and pressed, and the wine is called of the third cutting, and is considered inferior, and should be fermented by itself—the wine from the vat, the pressed wine, and that of the first and second cutting, should be mixed together in the vat before they are tunned to ferment, that the wine may be of the same quality.

The casks should be filled to within an inch or two of the bung. In a day or two the scum will rise to the bung: on the second or third day, according to the warmth of the weather, the scum will begin to work over, and should be cleaned off occasionally, at which time introduce the finger and clear away the thick feculent matter that adheres to the cask, as far as can be reached. The 3d, 4th and 5th days, and even longer, the wine will be in full ferment, and more wine should be filled in, to let the feculent matter work off. The froth will ultimately become clear, and in a few days subside to a simmer or hissing, and will only run over for a few minutes when more wine is poured in; at this stage, the stopples may be laid on to prevent dirt from falling in, or a piece of tile or slate will answer the purpose; when the wine is nearly silent, the bungs may be driven tight, and a gimblet hole bored near

the bung, fitted with a spile, which should be drawn occasionally to let off the gas; and the bung should only be drawn when more wine is poured in, which may be necessary every three or four days for a month, and every week until the wine is fit to draw off, which will be in about three months after the vintage.

The time of drawing the wine from the lees must depend on the taste and appearance: the taste must decide when the wine is dry enough, or its sweetness has in a great measure disappeared—the wine should be clear, for the intention in drawing off, is to free it from the lees, and prevent it from becoming hard and ultimately acetous. When it is decided to draw the wine from the lees, clear, cool weather should be chosen, as it is only in such weather that it is in good condition.

I omitted to say, in its proper place, that the holes in the head of the casks to receive the cock, should be bored not less than three inches from the lower staves in small casks, and about four inches in large ones, in order that the lees may settle below the hole, and the clear wine be drawn off entirely free from the muddy wine and dregs.

Nothing is more injurious to new wine than air, after the sensible fermentation is finished. To prevent the wine taking air, I prepared a wooden faucet to be inserted instead of a cock—to one end of the faucet I attached a leathern hose, or tube, 30 inches long and three-quarters of an inch in diameter, through which to draw the wine from the full cask into the empty one.

A spare cask is necessary: let it be filled with water for a few days, and when it is well drained rinse it with good French brandy, or a little hot wine, and let it drain out: if the former is used, pour a quart or two of wine into the cask and shake it well, and it will prevent the vapour of the brandy taking fire when the sulphur matches are burned in it.

To prepare the matches, melt some brimstone in an iron vessel, and dip some strips of linen or cotton rags, four or five inches long, in the melted sulphur, and make the matches. To burn the matches in the cask, prepare a tapering piece of wood six inches long; the small end to go easily into the bung; to the small end attach a piece of iron wire six inches long, and bent into a small hook at the lower end, for the purpose of holding the match while burning in the cask. When the matches have exhausted the atmospheric air in the cask, which may be known when they will burn no longer, the cask is prepared to receive the wine.

The uses of sulphuring, appear to be—1st. to exhaust the air in the empty cask, and prevent the air, which is a leaven of acetous fermentation, mixing with the wine—2d. to mix with the wine and neutralize the residual leaven, and cause it to precipitate in lees, from which the wine should be again drawn to prevent their being again mixed with it, and causing a renewal of the insensible fermentation, and fretting the wine.

Racking off from the lees.—The fermenting casks are 30 inches from the floor; place the empty cask below; drive the faucet into the head of the full cask, and place the open end of the leathern tube in the bung of the empty one—draw the bung of the full cask, and let the wine flow so long as it runs clear; and draw the muddy wine into a jug or other small vessel, where it will become clear and do to fill up with.

Discharge the lees from the emptied cask, and wash it very clean with water, to which some coarse sand and gravel should be added to scour off the yeast and lees that may adhere to the staves, especially near the bung. When the cask is clean, let the water drain off, rinse it with brandy or hot wine, and treat it as above directed, and it is ready to receive more wine.

When the wine is all drawn off, see that the casks are filled to an inch and an half below the

bungs, and that the bungs are driven tight to exclude the air. Every month the bungs should be drawn and the casks filled up as before.

In January and March, the wine should be drawn from the lees in the same manner; and again early in August before the wine will have become turbid by the August fermentation stirring up the lees. If the wine was very clear at the first racking, it need not be repeated in January—early in March will be sufficient.

Wine, in the first year, is continually working in the cellar and store-room, and more in bottles than in casks; it drinks differently at different seasons; in January and February new wine will be potable; and will drink hard during the rising of the sap in the vines until the flowering season is over; it will be again agreeable to drink until the grapes begin to ripen; and will taste harsh until the fermentation is over, when it will have become turbid by reason of the August fermentation.

Wine should not be bottled until October or November of the year after the vintage: two years would be preferable. When wine is removed to a distance, it will drink hard on account of the agitation of the journey, and should have a month of rest to recover its goodness. These observations are made on experience.

Fining of Wine.—There is but one case in which I recommend artificial fining; and that is, when the wine becomes turbid and is wanted for use. When the wine is weak and there is danger to be apprehended that it may become acetous, in the regular course of the fermentation, fining may be of use; but frequent drawing off and sulphuring is the better method. I have not found it necessary to fumigate with sulphur oftener than three times; in strong wine, twice will be sufficient to prevent acetous fermentation.

In 1820, I began to make wine from the fruit of my small vineyard: the strength of the juice has been already mentioned. I added sugar to the must, under the correction of the hydrometer; and after fermentation, added French brandy, to give the requisite strength to the wine. In 1821 and '22, I continued the same practice, but increased the quantity of sugar, and lessened the quantity of brandy; and in 1823, I added no brandy.

(To be continued.)

GRAFTING.

J. S. SKINNER, Esq., Pottersville, S. C.

By turning to volume 4, p. 6, of the American Farmer, your readers may discover some observations of mine on budding and grafting, with the motives which called forth the communication. My chief motive for communicating to the public then was, and at all times is, the publication of useful facts, rather than to amuse with my own or other people's conjectures: wherefore, it is due to the public to correct some mistaking of facts, into which I was led by authorities, aided by my own partial experience. There were two general propositions laid down, neither of which are true:

1st. "That every variety of plum, peach, nectarine, apricot, &c., will succeed on the wild crab stock."

2d. "The apple, pear, quince, medlar service, and hawthorn, will grow on the hawthorn."

Although I have obtained fine crops of apples from hawthorn stocks, and the grafts for a year or two made vigorous growth, they finally declined, and have mostly failed; and notwithstanding some few varieties of apples may succeed well on the hawthorn, they will by no means generally do so.

And I have learned by my own experience, from which source I assert the fact, that there are but few tame apples which will ever succeed on the wild crab stock, a fact which might not have been rationally inferred, and which I believe to be contrary to every written authority I have seen or heard of on the subject. And I may further acknowledge that I have lost much labour and time, and met with vexatious disappointments from a want of the knowledge of this simple fact. The Heese crab, with about half a dozen other apples, are all I have yet proved to thrive on the wild crab stock. Perhaps by twice grafting, or grafting upon a graft, every kind of apple might be made to grow successfully on the wild crab stock; but I am not fully justified by experience to make the assertion. This hint, sir, if attended to, may save some of your readers much labour and time, and from other serious disappointments.

We are generally taught by writers who treat of grafting, that all nut-bearing trees will graft on each other. I have learned from experience the incorrectness of this assertion; though the white walnut will flourish on the black walnut stock, it will not live for any length of time on the hickory nut, two years being the longest term I could get them to thrive thereon.

I have found more danger to attend summer pruning, than I at first anticipated. There are times at which it is dangerous to prune on account of bleeding. This property in vines is generally known; but I have observed the apple tree to bleed from year to year, from an ill-timed pruning. I cannot certainly say at what time pruning will produce this inconvenience, and no doubt the time will vary according to the lateness or earliness of the season; but I should suppose it would generally happen in May, or the last of April. I have also had large apple trees destroyed by a too liberal summer pruning, but have scarcely known small trees of any sort, at any season of the year, to be injured by heading down; but as this operation could answer little or no purpose in forcing buds inserted late in the season, it would be the most prudent to postpone it till the ensuing spring, if not done before the close of summer.

As one of your readers, a year or two past, living in Laurens district, S. C., requested information of me, by letter, relative to grafting apples into persimmon and walnut stocks, the practicability of which, he was under the impression I had hinted in the American Farmer; as I cannot recollect whether I ever answered his letter on this subject, I beg leave through your journal to correct his mistake. I never communicated such a hint for your journal; but a correspondent here to the westward, did so in his communication. I have promised to publish the medium for public use, as I shall be glad to do so.

As I have already stated, after a due consideration of the great dissimilarity which exist between the wild crab and the hawthorn, I am confident that the latter can, under no management whatever, make stocks for the former.

ABNER LANDRUM.

LADIES' DEPARTMENT.

HINTS FOR MOTHERS.

GENERAL PRINCIPLES OF EDUCATION.

Success in Education depends—First, more on prevention than cure; more on securing our children from injury, than on forcing upon them what is right. If we wish, for instance, to render a child courageous, we shall effect it, not so much by urging and compelling him to feats of hardihood, as by guarding him from all impressions of terror, or from witnessing a weak and cowardly spirit in others.

Secondly—on example, rather than on precept and advice.

As the bodies of children are imperceptibly affected by the air they breathe, so are their minds by the moral atmosphere which surrounds them; that is, the tone of character and general influence of those with whom they live.

Thirdly—on forming habits, rather than on inculcating rules.

It is little to tell a child what to do; we must show them how to do it, and see that it is done. It is nothing to enact laws, if we do not take care that they are put into practice, and adopted as habits. This is the chief business of education, and the most neglected; for it is more easy to command, than to teach and enforce. For example; a child will never know how to write by a set of rules however complete: the pen must be put into his hand, and the power acquired by repeated efforts and continued practice.

Fourthly—on regulating our conduct, with reference to the formation of the character when matured, rather than by confining our views to the immediate effect of our labour.

Premature acquirements, premature quickness of mind, premature feeling, and even premature propriety of conduct, are not often the evidences of real strength of character, and are rarely followed by corresponding fruits in future life.

Lastly—on bearing in mind a just sense of the comparative importance of the objects at which we aim.

As in the general conduct of life, it is the part of wisdom to sacrifice the less to the greater good; so is this eminently the case in the subject before us. Now the primary, the essential object of education is this: to form in children a religious habit of mind, founded on the divine principles of Christianity, and leading to the habitual exercise of practical virtue. To this, all other attainments are wholly subordinate.

These points, though frequently referred to in the following Observations, are thus stated separately, that they may the more easily be kept in view, as fundamental principles of universal application in every particular direction that follows.

It is only certain mode of roasting the coffee, is to roast, pound it, all in quick succession, the roasted berries losing their flavour if laid by for a day, and the coffee becoming insipid, even if roasted in the same manner.

The Arabs of the desert, who are from necessity economical in the use of this article, follow the same process, even if they require only two cups of the liquid, roasting a handful of berries on a plate, pounding them in a mortar and more.

It is only certain mode of roasting the coffee, is to roast, pound it, all in quick succession, the roasted berries losing their flavour if laid by for a day, and the coffee becoming insipid, even if roasted in the same manner.

it will generally do by the time the other preparations are completed, so that no time is lost, putting the pounded powder into it, and suffering it to boil, stirring it at the same time for about a minute or two, when it is poured out to drink. As the beverage is taken without sugar or milk, the slightest difference in the flavour is perceptible; and long experience having shown this to be the best way of preserving it in perfection, it is perhaps worth mentioning in detail, particularly as the use of this article has become so general.

[Buckingham's Travels.

SPORTING OLIO.



CANTON RACES.

The *Proprietor's Silver Cup* for saddle horses was run for on Wednesday, 17th inst. over the Canton course. Four horses were entered, and from the appearance of the horses, when brought up to the judges' stand, much close running was anticipated, which was justified by the result of the race. The following horses started at the sound of the bugle:

Mr. Potter's horse,
Mr. Brightwell's horse,
Mr. Montgomery's horse,
Mr. Schilling's horse.

The running was very close; but Dr. Montgomery's sorrel horse gained the two first heats, and won the Silver Cup in handsome style. The competition amongst the horses was very close and interesting.

NEW-YORK TROTTING CLUB.

The trotting club purse of \$200 was contested for yesterday, by Screws, Screw Driver, and Betsey Baker. It was won in handsome style by Screw Driver, in two heats. The first two miles in five minutes and thirty-six seconds, the second two miles in five minutes and thirty-eight seconds—\$100 in money, and \$100 in silver plate were delivered by the Vice President, with an appropriate speech. The owners and friends of the winning horse, gave a splendid dinner and champaign, at Snediker's tavern, where the following horses were entered for this day's purse—two miles and repeat, in harness. Tom Thumb, by Garvy Q. Brown, Screws, by Blank, Jersey Kate, by McGuire. Great sport is expected.

[New York Gazette, May 16, 1826.

MISCELLANEOUS.

REPORT OF THE WEATHER IN THE LATITUDE OF RALEIGH.

J. S. SKINNER, Esq.

Sir—You have requested that your subscribers should favour you and your patrons with reports of the state of the weather and other matters appertaining thereto, and I have thought under a similar impression that it might be useful—that I would do so occasionally. Well then our weather here ever since the month of March, has been extremely variable indeed, as you will perceive by inspecting the table below. Indeed the weather has been uncommonly changeable and fickle the past month, though generally so almost to a proverb.

If you could lay your hand upon an essay on this subject and some other matters connected with "agriculture," by Professor Mitchell, of our University, addressed to James Mebane, Esq. of Orange; wherein this subject of the great fickleness of our climate and weather is lucidly explained and philo-

sophically discussed, it would adorn the columns of your valuable journal.

If I am not misinformed the gentleman to whom it is addressed is *perhaps* one of your subscribers, viz: James Mebane, Esq. of Orange county, North Carolina. The essay goes into a useful and true examination of the causes and the difference of former and present modes of agriculture in this country, the means of recruiting our exhausted soils, and improving the bad system of the present times in all respects. But this is somewhat digressing (and as I am fond of "to the point man" I must endeavour to be so myself.) The present month of March, in this climate, has exceeded in variability of weather, any thing recollected even by the oldest inhabitants. The thermometer (Fahrenheit's) has raised very greatly indeed, being one day about 40 and 45°, and the next perhaps 82 or 83, or as low down as 35 and so on.

The influence of these sudden changes on the vegetation is, as might be expected, great indeed; in the latter part of February the sun shone with considerable intensity and the leaves and fruit of trees was rapidly expanding and maturing when we had some frosts to succeed, which would have equalled any in November. Inspect the following and you will readily understand me.

Day	Month,	March		o'clock.
2	-	35°	-	12
Do. 3	-	82°	-	12
Do. 4	-	43°	-	12
Do. 8	-	75°	-	12
Do. 10	-	33°	-	12

Frosts of and on quite throughout the month—fruit all destroyed—even wild fruit and all the leaves of the forest killed—green peas were sold in Wilmington, N. C. the last of February.

P. S. You publish the above or not, just as you think proper. I mean occasionally to favour you with a more regular account of the state of "the Thermometer" in these parts.

FRANKLIN.

N. B. The weather has been a compound of all the seasons in every sense of the word.

IRON CASTINGS.

Patterson, N. J. 6th May, 1826.

DEAR SIR—In the Farmer of the 28th ult. there is an inquiry signed L. respecting iron castings.—The kind your correspondent requires may be had at the West Point Foundry Association, Wm Kemble, Esq. New York, agent, I have just procured from them a few elements for a wheel of 14 feet diameter, the handsomest heavy castings I ever saw.

Yours, respectfully,

JOHN TRAVERS.

STEAM CARRIAGE.

Mr. Stevens has at length put his steam carriage in motion. It travelled round the circle at the Hoboken Hotel, at the rate of about six miles an hour. The curve of this circle is very rank, much more so than can be possibly required in pursuing the route of a road. This great deviation from a straight line gives rise to an enormous friction, the greater part of which, however, Mr. S. has contrived to obviate. His engine and carriage weigh less than a ton, whereas those now in use in England weigh from eight to ten tons. His original intention was to give the carriage a motion of sixteen or twenty miles an hour: but he has deemed it more prudent to move, in the first instance, with a moderate velocity, and has accordingly altered the gearing, which renders it impracticable to move fast.

[New York Paper.

REMARKABLE INCREASE OF SHEEP.

Three sheep, owned by Mr. James Philbrick of Rye, have brought him eighteen lambs within one

year, in April; and this year in March, one of the sheep brought three lambs, another two, and the other four, making eighteen within the course of twelve months. The same sheep yielded him twenty-four lbs. of wool (unwashed) at one shearing, i. e. eight lbs. each, on an average.

[Portsmouth Journal.

RECIPES.

TO CLEAN BLACK SILKS.

To bullock's gall, add boiling water sufficient to make it warm, and with a clean sponge, rub the silk well on both sides, squeeze it well out, and proceed again in like manner. Rinse it in spring water, and change the water till perfectly clean, dry it in the air, and pin it out on a table; but first dip the sponge in glue-water, and rub it on the wrong side; then dry it before a fire.

TO PRESERVE CLOTHES.

As clothes when laid up for a time, acquire an unpleasant odour, which requires considerable exposure to the atmospheric air, it will be prevented by laying recently made charcoal between the folds of the garments: and even when the odour has taken place, the charcoal will absorb it.

THE FARMER.

BALTIMORE, FRIDAY, MAY 26, 1826.

§7—The next meeting of the Trustees of the Maryland Agricultural Society, is fixed for Saturday next, at the Maryland Tavern. It being the last before the Show, and on the ground where the exhibition is to be held, it is hoped that the members will attend early.

§7—It will be recollected that the Cattle Show and Exhibition of domestic manufactures will be held on Thursday and Friday next, and that the proprietors of our steam boats, with a liberality that does them much credit, will transport, free of expense, fine animals intended to be shown for the premiums.

§7—We are assured that the Saxon sheep which were brought in the George and Henry, from Bremen, are, for the number, perhaps the purest and best ever brought to this country; as uncommon pains were taken and no expense spared in selecting them. The enterprise to which we are indebted for having them in our market, is creditable to the importer, and will, we trust, be well repaid. We are well persuaded, that, with him, it is not an affair of speculation.

VALUABLE IMPORTATION.—Just arrived in the brig George & Henry, captain Baker, from Bremen, twelve fine SAXON SHEEP, selected from the best flocks in Saxony; some of which will be offered for sale at the Cattle Show, on the first of next month.

EXTREME HEAT AND EARLY DROUGHT.—"The papers from the northern and western parts of this state, (says the New York National Advocate,) all complain of the extreme heat and sultry air which has been experienced on the whole line of the Erie canal to Buffalo. The thermometer has ranged from 90 to 95, for several days together; and having had no rain for a long time, the earth is literally parched up."

The above remarks may be applied to Maryland, and far South of it. A gentleman who may now be considered the father of Millers, remarked to

us yesterday, that at no time last summer were the streams of water lower than they are now. On the roads there is much difficulty in getting water for travelling and wagon horses.

COMMUNICATED—BY A CORRESPONDENT.

Meeting of the Trustees of the Maryland Agricultural Society.

The last was held, agreeably to adjournment, at WAVERLY. In the absence of a regular report, an unofficial sketch of their proceedings may not be unacceptable.

Whether attracted by the well remembered hospitality, and unfailing good cheer of the old venerable looking brown stone mansion, or by the sheer impulse of duty to promote agricultural improvements, this deponent saith not; but so it was, that we gentlemen of the plough and the reap-hook met once more, in full force and the best dispositions, under the wide-spreading branches of the elm and the willow that so well protect Waverly house from the heat of "raging noon." One of the Trustees, arriving later than the rest, * as he dismounted, was heard to repeat, with much feeling and emphasis—

"Welcome ye shades! ye bowery thickets hail!
Delicious is your shelter to the soul,
As to the hunted hart the sallying spring
Or stream full flowing, that his swelling sides
Laves, as he floats along the herbage's brink."

To each Trustee some special duty was assigned for the day of the Show; and a proposition to make every Trustee liable to impeachment and ouster, who should not take something for exhibition was not finally acted upon.

R. Wilson, Jr., was appointed counsellor to the Society, with the understanding that he, with the aid of the most zealous member of the Board, is to see that all infractions of our act of incorporation be repressed and punished—*by process of law!*

The good effect of these agricultural associations was never more apparent, though none can so well relish and appreciate them as those who participate of the fruits they produce. The most sceptical, however, will admit that an institution cannot be bad, which spreads before you on the 18th of May, in a season of unparalleled drought, fine fat lamb, chickens, green peas, cauliflowers, cucumbers, strawberries, &c.

We were told by a neighbour, that Waverly was unproductive when it came into the hands of the present industrious and judicious proprietor; that with the beds of lime stone discovered on the premises, he had made it spin its present rich and various productions, as a spider does its web—out of its own bowels. The number of thousands of bushels of lime, spread annually upon its surface, would be incredible, were it not for the luxuriant and heavy crops of corn and grass that spring up in attestation of its truth and efficacy.

When your journal was put forth, about the farmers of America to feel the high importance and proper value of calling; and that its improvement, mounted, and its respectability enhanced, by the force, but by mind acting upon the Waverly farm and its products, the Baltimore and its products, its income from that source is now little less than \$2000 per annum! all that is for the distance of 16 miles, and presented a beautiful pound of prints to the eye, as that yearning

of all countries, so intimately intermixed and blended, according to the ingenious system pursued at Cloud Cap, in opposition to the celebrated Bakewell plan of "in and in," that none but a Seebright connoisseur could tell what blood predominated. None but the author of this hit-all miss-all theory of combinations can ever breed them all "back again," as Mr. Meade says, to their original race and features.

The Editor of the American Farmer moved an early adjournment from the cow-pen to the dairy; maintaining, as is his custom, that where the taste can be brought to bear, it is to be preferred in all cases to any other test; and he undertook accordingly to pronounce upon the aggregate of each separate blood in the cow-pen, by specimens from the pail; rivalling, in this respect, the discriminating powers of a celebrated farmer, who discovered that milk of different races, mixed and churned at the same time, would yield their butter in succession—his favourite Alderney always taking the start of the rest. The following was finally given by Mr. S. as the aggregate proportions of the different breeds in the Waverly cow-pen:

- 1-16 Improved Short Horns;
- 2-16 unimproved Short Horns, or Holderness;
- 2-16 Alderney;
- 2-16 Devon;
- 2-16 Kyloe;

1-16 Galloway, or polled breed—all resting upon a solid substratum of country breed.

In the establishment of this lactometrical table for the Waverly dairy, the aforesaid Editor is said to have tasted to an extent that was manifest in reduced sales of butter on the next market day.

As I was compelled, most reluctantly, to leave my generous host at this point of our duties, I leave it to you, Mr. Editor, to complete the sketch.

* **TO PRODUCE WATER FOUNDER.**—Take a fat horse, that has not been much exercised; drive him off rapidly at noon-day—

"When the heifers seek the cooling lake
And in the middle pathway basks the snake"—
give him a gallon of cold water at every pump; and if that does not stiffen him in less than 16 miles, you may consider him founder-proof.

* **TO CURE WATER FOUNDER.**—Tie up his neck, and pierce the jugular with a sharp penknife; give a pound of salts, and stand him for some hours up to his knees, in a running stream. Let his owner tarry all night, and rising when the lark

"Shrill-voic'd and loud, the messenger of morn,
Calls up the tuneful nations;"

and before he can take two mint juleps, his horse will be able to bring him home.

MERINO SHEEP.

For sale, a small Flock of Merino Sheep (58 in number, including Lambs.) Apply to Israel W. Morris, near the five mile stone on the Philadelphia and Lancaster turnpike road. 5th Mo., 23d, 1826.

CONTENTS OF THIS NUMBER.

Wool, Mr. Shepherd's opinion of samples sent by the Editor—Richard K. Meade on Sheep—Cultivation of Cotton in Virginia—Observations on the means of preventing and relieving the Accidents and Diseases to which Farmers are particularly subject, by James Mease, M. D. concluded—Calculations on the Cotton Trade—Camblet woolled Sheep—Wool—Prospect of Crops—Essay on the Culture of the Grape Vine and the making of Wine, by Thomas M'Call, Esq. Laurens county, Geo. continued—On Grafting—Hints for Mothers—A new method of preparing Coffee—Canton Races—No. Trotting Club—Report of the Weather in Raleigh, N. C.—Iron Castings—Mr. Stearns' Steam Carriage—Cattle Show—West and North Carolina—Communications—Editorial and Miscellaneous.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE		RETAIL	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	7 50	8		
BACON, and Hams, . .	lb.	5	7 1/2	9	12
BEEF-WAX, Am. yellow	—	33			50
COFFEE, Java,	—	17	18	22	25
Havana,	—	17	17 1/2		20
COTTON, Louisiana, &c.	—	14	15		
Georgia Upland, . . .	—	11	12 1/2		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	12			14
CHEESE,	—	8	10	12	15
FEATHERS, Live, . . .	—	30	33	37	
FISH, Herrings, Sus.	bbl.	2 25			
Shad, trimmed, . .	—	7 00			
FLAXSEED, Rough, . .	oush	75		87 1/2	
FLOUR, Superfine, city,	bbl.	4	5 00	6 00	
Fine,	—	3 75	4 50		
Susquehanna, superfi.	—	4	4 25		
FLAX,	lb.	9	11		
GUNPOWDER, Balti.	25 lb	5 00	5 50		
GRAIN, Indian Corn, .	bush	67	70		
Wheat, Family Flour,	—	85	90		
do. Lawler,	—	50	70		
do. Red,	—	80	82		
Rye,	—	68			
Barley,	—	80			
Clover Seed, Red . .	bush	3 87 1/2	4 25	4 75	
Ruta Baga Seed, . .	lb.	1		2 00	
Orchard Grass Seed, .	bush	1 75			
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	2 25		3 00	
Oats,	—	46	47	50	
Beans, White, . . .	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country, . . .	—	120	130		
HOPS,	lb.	20		31	
HOGS' LARD,	—	7	8	12	
LEAD, Pig,	lb.	6 1/2			
Bar,	—	8	8 1/2		
LEATHER, Seal, best,	—	23	24	62	
MOLASSES, sugar-house	gal.	45		62 1/2	75
Havana, 1st qual. . .	—	28	30	37 1/2	
NAILS, 6a20d.	lb.	6 1/2		9	
NAVAL STORES, Tar, .	bbl.	1 25	1 38		
Pitch,	—	2 25			
Turpentine, Soft, . .	—	1 50			
OIL, Whale, common, .	gal.	30	31	40	
Spermaceti, winter .	—	70		88	
PORK, Baltimore Mess,	bbl.	11 00	12 00		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	4 37 1/2	4 50		
ground,	bbl.	1 50			
RICE, fresh,	lb.	2 1/2	3	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5 1/2	7 1/2	8	12
WHISKEY, 1st proof, .	gal.	29 1/2	31	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPE BRANDY, 1st pr	—	36		50	
SUGARS, Havana White,	c. lb.	13 50	15	16	
do. Brown,	—	9 00	9 25		
Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	
SPICES, Cloves, . . .	—	70	75	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	16 1/2	17	25	
SALT, St. Ubes, . . .	bush	43	45		
Liverpool Blown . .	—	45	48	75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	
do. Sicily,	—	1 20		2 00	
Lisbon,	—	1 15		1 50	1 11
Claret,	doz.	4	8	5 00	9 11
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	35	40		
do. crossed,	—	25	30		
Common, Country, . .	—	20	23		
Skinnners' or Pulled, .	—	25	30		

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AGRICULTURE.

PENNSYLVANIA AGRICULTURAL SOCIETY.

Quarterly Meeting.

The Chairman of the Committee appointed to confer with the Board of Health on their communication read at their last meeting, reported—

That he had been examined by the Committee of the members of the city and county delegation at Harrisburg—that a law had been passed to effect the objects contemplated, and that he had no doubt very useful results would proceed therefrom.

The following communications were read:

From the Secretary of the New York Agricultural Board, presenting the third volume of their Memoirs, an interesting and valuable work, embracing the most important topics of agricultural inquiry.

From James Williams, Esq., of Hilton, Philadelphia county, on the comparative merits of various esculent roots—on the seasons for sowing them—on prejudices as to the influence of the moon upon vegetation—on an ingenious contrivance for depositing seeds in drills—on deep ploughing, and the advantage of stirring the soil between growing crops—on the extraordinary success and skill, displayed by Mr. Walker, in the management of his farm near Holmesburg.

From J. Whitaker, Esq., of Burley, Yorkshire, Eng. giving his mode of managing and rearing calves, condemning the practice of feeding them from pails, shewing that his finest short horned heifers are reared by allowing one "nurse" to nourish two calves until the early part of the autumn—that during the winter they are fed with straw, turnip tops, sometimes with a little linseed cake meal—the succeeding summer they are kept on grass alone, and the following winter fed, together with the dry cows, on straw and turnips.

From a gentleman of Philadelphia, inquiring as to the probable success of a German farmer, disposed to emigrate with a flock of 500 Merino sheep—the district of country best suited to his purposes, and the price of land, &c.

From Loyd Jones, Esq., of Montgomery county, on orchard grass—its superiority for pasturage—its excellence when converted into hay—its nutritious properties—the large quantity of seeds it affords—the profits of its cultivation—the causes of its occasional failure, from the want of accuracy in tillage, and the bad quality of the seeds, too often encumbered with chaff, and frequently injured by improper management in securing them.

Mr Jones' communication was confirmed, by the experience of Mr. G. W. Roberts and Mr. Powell.

From Mr. Massey, of Delaware, on his decided preference for white cattle, as better fitted to endure heat.

From a gentleman in New York, complimenting the Society upon their exertions for the introduction of improved races of farm stock, applying for Improved Short Horns, and Southdown sheep, and asserting that he had found root crops highly valuable in promoting the health, and the useful secretions in neat cattle and sheep.

From a gentleman in Connecticut, ordering an Improved Short Horned bull calf, adding—"I am decidedly in favour of the cattle" (Improved Durham Short Horns,) "and think them superior to any other breed although I am an owner of Devons."

From a gentleman in Kentucky, who had some years since imported short horned and long horned cattle, inquiring for an Improved Durham Short Horned Bull, and coarse woolled sheep, contending "it must be greatly to the interest of the farmers of

this state to increase the quantity of wool, without much increase of the number of sheep. They want wool of a strong staple, easily manufactured into blankets, linseys, kerseys, &c. for negro clothing, and for working clothes for the whites. Nine-tenths of our wool is consumed in such fabrics. A cross by males of the long woolled breed, on the females of the common breed of our state, would, I think, best answer such an end. My intention was to have associated two or three gentlemen with myself, and for this object import some such sheep."

As the three last letters were not intended for publication, merely passages from them were read, and the names of the parties were withheld.

The Recording Secretary presented the following certificate:

"I certify that I witnessed a performance of Wye Comet, an Improved Durham Short Horn Bull, lately belonging to Col. Powel, on the 3d inst. He walked a measured mile on the turnpike, led by a boy, in precisely eleven minutes."

(Signed)

WILLIAM HUGHES.

April 8, 1826.

This was corroborated by the Recording Secretary, who stated that he also witnessed the performance, and that there could have been no mistake. He and two others having held watches, and having agreed perfectly in the time.

A member having stated that he was led to believe that the cost of the best Saxony sheep in Germany would admit of their sale here, at prices not exceeding sixty dollars; it was

Resolved, that the Corresponding Secretary be instructed to communicate in behalf of the Society, with such persons as he shall deem fit, to obtain accurate information as to the expense attending their first cost, and transportation.

(From the Minutes.)

JOHN P. MILNOR,

Recording Secretary.

SHEEP HUSBANDRY—SAXONY MERINOES.

DEAR SIR,

Steubenville, May 22, 1826.

In a late number of the American Farmer, Mr. McDowell was requested by a "Connecticut Farmer" to state "when and by whom the sheep were imported from Saxony, from which his flock was descended." As Mr. McDowell purchased his Merinoes from me in the first instance, and as I was his author with regard to their Saxon origin, (though in truth I never valued the sheep the more on that account,) I felt it to be my duty to write to Mr. Caldwell, from whom I purchased the foundation of my own flock; and I have now the pleasure of enclosing you the reply of that gentleman, who is a practical man, and a master of the subject about which he writes. His suggestions are important on the subject of breeding generally, and I flatter myself that you will be pleased with an opportunity of publishing his letter in your valuable paper.

In expending more than forty thousand dollars for Merino sheep, Mr. Caldwell, with a discrimination surpassed by no one in the country, purchased up the cream of almost every importation from Spain, during the period of the invasion of that country by the French. Some time after the declaration of peace in 1815, he sold the principal part of his fine flock to the Messrs. Howells, of New Jersey, who transferred it finally to my care; in which situation it has maintained (to say the least,) its original purity and excellence. In numbers, it has greatly improved.

I intend, on to-morrow, to start a man with one of my fine rams, to be exhibited at your approaching cattle show; and I will presume to compete for the silver cup which has been offered in such flattering terms. Should there be room in the wagon,

I will send one or two more. If they safety, the farmers of the country will, convinced that they can purchase as (Ohio (of Saxon origin, too!) as can be Saxony, or any other country, and upon other terms." My chief object, however is to demonstrate to the manufacturers try, that we can raise in the United States abundance of wool of the first quality terms than we can get it for from abroad the farmers only want their encouragement the business of sheep raising. vation of Mr. Caldwell accords with my ence, that the wool improves in this country proper attention is paid to the animal as protection from the weather; and above and unadulterated. It is worthy of record considers it unsafe to breed from an animal ever may be his external appearance, which ticle of base blood in him.

I am, very truly, your friend

And obed't serv't,

W. R. DICKINSON, Esq.

JOHN S. SKINNER, Esq.

Philadelphia, Apr

W. R. DICKINSON, Esq., }

Steubenville: }

Dear Sir,—In compliance with your proceed to communicate the information respecting the origin of my Merino flock, as my memory will permit. In the year 1806, I purchased one ram and two ewes, from Col. Humphrey's Merino flock, for \$300. This ram was accidentally killed time after, and in the spring of 1807 Muller imported into Philadelphia six ewes which he said had been obtained by the flock of the Prince of Hesse Cassel.

were all remarkably fine animals, and at my request I took them to my farm until they had recovered from the voyage, and were in proper condition I then prevailed on Mr. Muller to let of these rams, and to name his own price. I presented to this as a personal favour, and sider it as a sale when he named \$100 sufficient to defray the original cost and the sum was paid by me with great satisfaction though at that time I would rather have of equal quality, directly from Spain best to procure the water at the fountain less liable to impurities than further stream. A sheep of this Merino blood the external qualifications of a full blood but no experienced breeder would think safe, or desirable to breed from such when the genuine full blooded can be would prefer one of the best horses of speed and bottom, to the most beautiful racer, if I desired to propagate and per qualities. And even now I would rather the best Spanish ram, than with the Merino, unless I knew that the Merino been kept pure and unmixed in Saxony contrary practice, would be gradually, but breeding back again into the common country. I have, however, every reason

*I have now between one and two hundred which will compare, in my humble opinion, best in Saxony; and I have for the last been compelled to castrate nearly all my specimen now sent will determine their compared with the Saxons, some of which, sent to the Exhibition; for after all, I rated my flock.

†I allude to Ohio.

†Mr. Caldwell says "every part." Mr. includes Kentucky, Tennessee, Illinois, &c

that those sheep imported by Mr. Muller, were perfectly pure Merinoes, and I think that Columbus was the first descendant from Muller's ram and one of Col. Humphrey's ewes. You are certainly under a mistake in thinking that Columbus was the best ram in my flock. It was Americus that sheared 12½ lbs. of wool which I sold for \$25 cash. It was Americus that weighed 148 lbs. Americus was begotten by Columbus, and was, in my opinion, in all respects, a superior sheep. I now think that Americus was the best Merino ram that I have ever met with; although I have travelled from Boston to Alexandria for the purpose of examining all the early importations from Spain, and of purchasing the best that I could find.

I have expended more than \$40,000 upon Merino sheep, but never could find one equal to Americus in every respect. I do not remember the weight of Columbus, but his fleece never weighed more than 9½ lbs. which I also sold at \$2 per lb. Mr. Howell paid me \$300 for Columbus, at a time when the best imported Spanish rams were to be had for \$50; and some time after, when the price of Merinoes was considerably lower, the same Mr. Howell gave me five hundred dollars for Americus. I presume that you have mistaken the names of these two sheep.

Mr. Dupont, of Brandywine, has lately imported some Saxon Merinoes. He thinks them better altogether than the Spanish, and he is an excellent judge. I know of no individual more competent to decide the question. Nevertheless, for the reasons already given, I think the Spanish Merino the most valuable acquisition to this country; and they have always improved in every part of America, where they have had an abundance of food, and been protected from the weather, and above all kept pure and unadulterated.

With the greatest respect,

Your obed't serv't,

JAMES CALDWELL.

N. B. The greatest part of the Saxon Merinoes are most probably the result of repeated crosses with Spanish rams. J. C.

HESSIAN FLY—WEEVIL FLY.

J. S. SKINNER, Esq., *Eastern Shore, May 24, 1826.*

Dear Sir,—It would appear that the farmer, and more especially the grain farmer, always has something to annoy him, either before his crop has come to maturity, or in getting it in; or after it is got home, either in the house or stack. The Hessian fly maintains its character of being the most destructive insect to the wheat crop, that has ever been known in this or any other country. If the wheat is sown too early, this insect is sure to make havoc in it in the autumn, and too often it makes its ravages in the spring, under every and all circumstances. In fact, no human invention or foresight can guard against its effects, thus making the wheat crop a precarious one. But now, and for some two or three years, the Weevil fly has attacked the grain itself of the wheat; and if not arrested in its progress, it has been known to eat up the substance of every grain, leaving nothing but the skin. It was only last year that farmers began to know the necessity of getting their wheat early in August, and cutting it before the Weevil fly could get at it.

THE HESSIAN FLY—WEEVIL FLY. The Hessian fly is a pest which has been known to attack wheat in this country for many years. It is a small insect, but it is very destructive. It is said to have been introduced from Germany. It is now a common pest in many parts of the country. It is said to have been introduced from Germany. It is now a common pest in many parts of the country. It is said to have been introduced from Germany. It is now a common pest in many parts of the country.

getting out wheat early in August, and letting it lay in the chaff, and thus destroying the eggs of this insect by this means, he would do immense benefit to this country by publishing his knowledge and experience on the subject of the Weevil fly. From such a source of science as Mr. Jefferson, the Weevil fly would cease to do any injury to the wheat after it is cut down. From his pen we might expect the natural history of this insect, which cannot be equalled any where.

I am, your obedient serv't,

A FARMER.

PROSPECT OF CROPS.

The fly made its appearance later than usual this season, owing to the cool and damp weather. The heat and drought of May brought it into life and action, and its ravages have been severe: whole fields are now destroyed; the thin lands will scarcely produce their seed; some not half. The good and the manured lands are greatly injured, and the continued drought prevents recovery. Prospects are gloomy. Upon the whole, we have scarcely seen the approach of June so near, with such generally bad appearances. Rain, even now, would improve the well farmed land crops, but nothing can restore the general loss.

Corn is low and later, but the drought enables the farmer to work it well and to destroy the weeds and grass. In its young state, Indian corn suffers but little from drought. Oats promise nothing; the gardens suffer extremely; the fruit generally destroyed. Grass never promised a worse crop.

[*Easton Gazette, May 27.*]

MR. SKINNER,

Charleston, S. C., May 22, 1826.

"I am but a few days from my plantation, where I have been busily employed in setting my crop, which at present promises well, notwithstanding the great drought which has prevailed for a month or six weeks past. The rivers throughout the State are generally salt, and tide swamps, upon which the rice is planted, are in a suffering state. Should there be no rain for a fortnight or three weeks, sufficient to freshen them, there will be but little rice made. The cotton and corn crops are now suffering. Of oats, rye, and barley, there will be little or none made."

HORTICULTURE.

SILK WORM.

J. S. SKINNER, Esq.,

Easton, May 24, 1826.

Dear Sir,—In your last American Farmer, I read the report of the Committee of Congress on the subject of the silk worm. If I could get a few of the eggs of this insect I should like to make a beginning this year, as I have several Mulberry trees which are large and would feed a thousand and more. If you could procure some of the eggs, I would be very glad to receive them.

Yours very truly,

J. S. SKINNER.

THE SUEWING OF THE SILK WORM.

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THE SUEWING OF THE SILK WORM.

sugar in the vat, and let it ferment four hours; pressed eleven gallons of must, which raised the hydrometer 15°. When the wine was drawn from the lees, it was clear and of a fine amber colour: it has become stronger than French wine, and may not be so strong as Madeira; but the flavour is much superior to any wine that I am acquainted with.

August 14th, collected a basket of wild bunch grapes and a basket and a half of berries of the wild muscadine—strength each as already mentioned; mixed them together and added 9 lbs. of sugar in the vat, where it fermented all night; pressed seven gallons of 12½°—added 3 lbs. more sugar, which raised the hydrometer 14°. When the wine was drawn from the lees, it was of a full claret colour, and of excellent nutty flavour, but a little tart. This wine is stronger and more flavoured than any French wine that I have tasted.

August 14th, collected eight baskets of Warrentons, three of Madeiras, and two of wild bunch grapes, and mixed in the vat—unpressed juice 8½ deg.; added 52 lbs. sugar and let it ferment five hours; pressed 36 gallons of 15 deg. This wine is of the Madeira colour, is strong enough for its age, and of superior flavour to any Madeira wine that I have tasted at eighteen months old.

August 21st and 29th—On these days I collected 21 baskets of Madeiras and six of Warrentons—unpressed juice 8 deg.; added 117 lbs. sugar and let it ferment six hours; pressed at the several times, inclusive, 88 gallons of 14 deg. This wine was of the Madeira colour, not so strong as the former, and was somewhat tart; the tartarous acid in the grapes was not sufficiently saturated with sugar.

September 11, collected six baskets of Warrentons and one of Madeiras, and two of very ripe wild muscadines—unpressed juice 8 deg.; added 40 lbs. sugar, and let it ferment in the vat all night; pressed 30 gallons of must of 14 deg. This wine is of higher colour than Madeira, and for a year had a disagreeable honey taste from the very ripe muscadines; but that flavour has nearly disappeared, and the wine was, recently, preferred by several guests at the table of a neighbouring gentleman, to an old Madeira wine that cost four dollars a gallon by a half pipe.

Grapes 56 baskets, Sugar 236 lbs. Must 173 gals.

Loss in fermentation . . . 10

" lees 22

" leakage 2 ——— 34

Clear wine 139

Deduct for wild grapes 13

Product of 120 vines, on a quarter acre, 126 gals.

No brandy was added.

The whole of the vintage season was wet, except the first collection of the grapes: the grapes from the vineyard the 11th Sept. did not change colour, because of the rain and cloudy weather; the ripe muscadines gave colour to the wine.

Experiments in 1824.—In 1824, I had 240 young Madeira vines, that bore ten or fifteen bunches each, for the first time, in addition to my former stock.

The wild grapes so generally rotted on the vine that I obtained only one basket of the grape—unpressed juice 11 deg.; added 4½ lbs. of brown sugar in the vat, and let it ferment six hours; pressed nearly three gallons of must, which raised the hydrometer 16 degrees. The fermentation was over in five days; and the wine was made and became clear by the 16th of October, when it was racked and sulphured. By the 17th of February, 1825, it became so well matured that I bottled it; the colour and taste resembles the best claret. It is very preferable.

THE SUEWING OF THE SILK WORM.

—unpressed juice 10 deg.; added 20 lbs. of sugar, and let it ferment five hours; pressed 13 gallons of must, of 16½ deg. The season was dry, and the quantity of must being less than expected, the tartarous acid was rather super-saturated with sugar.

August 18th, collected rather more than five baskets of Warrentons—unpressed juice 10 deg.; added 21 lbs. sugar and let it ferment five hours; pressed sixteen gallons of between 15 and 16 deg. The season was wet, and the quantity of must more than was expected; and the wine appears to have rather too small a quantity of sugar, which can only be judged of when the wine gets older. These wines have the colour and flavour of that of 1823, at the same age.

The Madeira grapes ripened on the 12th, 16th, 19th, 21st, and 25th of August, and the several parts of the vintage manufactured separately. The unpressed juice varied from 8½ to 9½ deg., as the season was more or less wet. The first four (12th, 16th, 19th, and 21st,) 55 baskets of grapes were collected, and 302 lbs. of sugar was added in the vats, where it fermented six hours; pressed at the several times 193 gallons of must, which was regulated to 16 deg. by adding a small part of the sugar after pressure. In making the wine of the 16th, I stripped off the berries from the stems before mashing them in the vat, to try the difference it would make in the wine: divesting the grapes of the stems, was a cause of some difficulty in pressing, by the want of something to hold the marc together during that operation: it seems to me that this wine is not so strong, nor of such vinous taste as the others; tannin from the stems is wanting. On the 25th, 14 baskets were collected; added 93 lbs. of sugar and fermented in the vat seven hours; pressed fifty-one gallons of 17 degrees.

69 baskets Madeiras, 395 lbs. sugar, Must 244 gals.		
10 " Warrentons, 41 do. do. 29		
1 " Wild bunch, 4.5 do. do. 3		
80	440.5	276

Thermometer in the wine in full fermentation was 92 deg.; when in the shade it was 73 deg. Mr. Adlum observes, that with him it was once 115 deg. in the fermenting wine.

November 13th, the wine had all become clear, and was drawn off from the lees.

Must from Madeira grapes	244 gals.
Loss by breaking demijohns	9
Do fermentation	16
Do. lees	36— 61
Clear wine	183
Must of Warrenton grapes	29
Loss in fermentation	2
Do. lees	2— 4— 25
Total clear wine	208 gals.

and probably not more than 50 gallons of it was from the young vines.

The wine from Madeira grapes will be strong enough, especially that of the 25th, and the flavour not much inferior to that from Warrenton grapes, and much superior to any Madeira wine that is imported. This grape has much tartar and mucilage, perhaps an over portion to the water: it requires a large addition of sugar to saturate the tartar and give the best flavour; it should not be less than 16, nor need it be greater than 17 degrees.

The Warrenton has less tartar than the Madeira grape, and considerably less mucilage; if the must is raised to 16 deg. it should ferment in the vat for six hours. But I think the better method is to raise it to 15½ deg. and let it ferment five hours in the vat. When the vines get more age, 15 deg. or less will probably be sufficient; for as the vines grow

older, the tartar in the grape diminishes, and the saccharine principle is increased.

The wild bunch grape has red juice, much tartar and but little mucilage: to add sugar until the must is 16 deg. is sufficient to saturate the tartar, and the wine will be strong and highly flavoured. If this vine were cultivated for ten years, the juice of the grapes would probably increase in weight and richness to the 14th degree, or even more; in which case it would probably make wine as strong and as highly flavoured as the best red wine of France. Some of the high land varieties of this grape have much sweeter juice than the one I have used, and considerably resemble, in plant and fruit, the Warrenton—but the juice of the Warrenton is white.

In Madeira, the average crop, according to Staunton, is 25,000 pipes; value 200,000*l.* sterling; the highest price per pipe 60*l.*; the average price is less than 14*l.* a pipe. Nearly half the wine is too poor for market, and is distilled into brandy, part of which is added to other poor wines to make them marketable—with such, is the American, Russian, and other markets supplied. Their best wine is reserved for the priests, and planters of the island, and for the priests and nobles of Portugal: their next best, which grows on the South side of the island, is monopolized by the English resident merchants, and is supplied to the nobles, higher clergy, and gentry of England: we take their refuse; unless by special favour of an English merchant we obtain a very small quantity of *London Particular*. I have tasted none such for twenty years. All the wine we now get from that island is grown on the north side, and is inferior, and its use is equivalent to the use of strong brandy and poor wine mixed.

I have never tasted Madeira wine of the first quality, but of two pipes; the first was sent by Charles Murray, Esq., British Consul at Madeira, to his friend Mr. T—, of Augusta, in 1786; the last was 25 years ago, and always introduced as the last glass or two at the table of Mr. Y—, a gentleman of Savannah. Neither of those wines was strong enough to suit the vitiated palates of the present time.

In France they have less than two millions of acres of land under vines. The value of the crop, says Arthur Young, is equal to one hundred and sixty millions of dollars. Much of their wine is weak, and will not bear to be kept long; the common people use it as we do tea and coffee, and for ordinary table beverage. Of the value of these wines, I take the following from Messrs. Stroble & Martin's price current, Bordeaux, in 1800. Their prices are in francs and centimes; a franc is 18½ cents American money.

Wine, red, common cargo, pr. tun, 200 <i>l.</i> to	250
E. India, do. (of 1798,) do. 500 to	550
Superior Claret do. 1000 to	5000
White cargo do. 200 to	250
Common Claret, pr. bottle 1.20 to	2
Superior do. do. 3 to	6

Or, in our money, from \$0.22 to \$1.11 per bottle by the quantity. The crop that year was stated to be from a fourth to a third short, and the wine of superior quality. It is probable that the wines of Burgundy and Champaign sold for similar prices. This shows, that we cannot drink the best French wines under \$2 a bottle; and that we never obtain them because of the price. I have never tasted the best qualities of French wines.

I was informed by a gentleman who had been a captain in the French Police, that a vineyard near Bordeaux of 30 arpents (25 acres,) sold for 300,000 crowns, (\$333,000,) upwards of \$13,000 an acre. I have proved by experience, that a quarter acre in vines of seven years old will yield 126 gallons of clear wine, which is 500 gallons an acre; a proper soil would yield much more.

2 acres of vines, well cultivated, will yield	1000 gals.
2 years in cask, will lose 7 per cent. per annum,	140
	860
Expense—1 hand to cultivate,	\$200.00
Cost of sugar	200.00
do. casks	30.00
	430.00
2 years interest at 8 per cent. per annum,	68.80
	\$498.80
Sell 860 gals. at \$1,	\$860
Freight, commission, &c. at five per cent.	43
	817.00
Nett profit,	318.20

which is the interest of \$3977.50 at 8 per cent., and shows that an acre of sandy piny land in vineyard, is equal in value to \$1988.75 money at interest.

If the wine sells for half the price of Madeira wine—then

860 gallons of wine at \$2,	\$1720.00
Deduct culture, sugar and casks	\$430.00
2 years interest thereon,	68.80
Freight, and charges to market, say	21.50
Commission on sales 2½ pr. cent,	43.00
	563.30
	\$1156.70

which is the interest on \$14,458.75 at 8 per cent.; and shows that an acre in vineyard is worth \$7229 37½ cts., money at interest.

If 860 gallons of wine sell at Madeira price, \$4 a gallon, is	\$3440.00
Deduct culture, &c.	\$430.00
2 years interest thereon,	68.80
Freight and charges to market,	21.50
Commission on sales at a 40th	86.00
	606.30

Nett profit, \$2833.70

which is the interest of \$35,421 at 8 per cent., and shows that an acre of vineyard is worth \$17,710.50 money at interest.

I recommend to my fellow citizens to plant vineyards, and cultivate them with care; and by attending to the rules I have laid down, they will make excellent wine; which will enable them to do without the refuse wines of other countries. If a poor man will plant 120 vines, which he may cultivate without any material interference with his other labours, he may have a bottle of as good wine on his table, every day, as the greatest king or priest of Europe—and may sell enough to pay for the sugar, casks, and bottles, and pay his taxes.

THOMAS McCALL.

Retreat, near Dublin, Feb. 22d, 1825.

GARDEN BEANS.

Should be planted about the middle of May, half an inch deep, in rows. The rows for bush beans should be three feet apart, with the hills in a row 2½ feet from each other. The rows for pole beans should be 4 feet apart, and the hills in a row 3 feet from each other. They should be hoed three times before the flowering time; but must never be hoed when wet with dew or rain.

[N. E. Farmer.

ASPARAGUS.

[From the asparagus beds of Mr. Miltenberger, of Pittsburg, described at p. 301 of vol. 7—we had lately the pleasure to receive a present of a large bunch, one spear of which is represented below. They were all nearly as large as this, which represents exactly the size of the one sent to the engraver.



FL. AND BRANCHES OF THE CAULIFLOWER, from the garden of J. B. Morris, Esq., that for size and the perfection and delicacy of the flower, have never been surpassed in our market. Is it not strange that for such cauliflowers ready sale at 50 cents per head, does not tempt gentlemen or professed gardeners, to increase their crop?—his was a delicate and esteemed vegetable.

ANGOLA PEA.

South Carolina, May 20, 1826.

MR. SKINNER,

A year or two since an inquiry was made in the American Farmer, relative to the Angola Pea, of which the Abbé Raynal spoke so much and so highly in his "History of the West Indies." I have not observed any reply, which has induced me to think that it has been classed among those hearsay marvels to be too often found in historians of all classes.

On reading Malte Brun, (vol. 3, p. 2, Edin. 1822,) I find it mentioned as grown in Java. Malte Brun also speaks of a Yam, (*Dioscorea alata*), as sometimes "attaining a weight of 40 or 50 lbs."

Now, if, as Charles II. said to a certain lady of his court, half of what the Abbé says of the Angola Pea be true, it is sufficient, and I should hope some of the gentlemen trading to Java will endeavour to procure a few of the seed. I think the Abbé says it succeeds in the West Indies. If it would do there, I should think it could be cultivated in the Southern states.

AMPHICOM.

P. S. This work of Malte Brun* is an admirable one; in fact, the best geographical work, to my knowledge extant. There is in it an interesting account of the Birman empire, (Book 51,) which indicates that, if conquered, as it is said they are, they will add as much to the commerce of Great Britain as any of her late conquests in that quarter—particularly in the supplies of cotton, rice, tobacco, timber and turpentine.

Malte Brun, vol. 2, pt. 2, pp. 345-6. Edinburg ed. 1822. "Though this empire extends into the torrid zone, it enjoys a temperate climate, in consequence of the elevation of its territory. The healthy and robust constitutions of the natives show the salubrity of the climate. The seasons are regular. Extreme cold is unknown, and the intense heat which precedes the rainy season, is of short duration. This country exhibits every variety of soil and exposure. A flat marshy delta extends along the mouths of the Irawaddy. Beyond this are pleasing hills, picturesque vallies, and majestic mountains. The fertile soil of the southern provinces yields crops of rice equal to those of the finest districts of Bengal. Although the surface is more irregular and mountainous to the north, the plains and vallies, especially those situated on the banks of the great rivers, produce excellent wheat, and the different corn and leguminous crops which are cultivated in Hindostan. Sugar canes, excellent tobacco, indigo, cotton, and the tropical fruits, are indigenous in this favoured country. The teak grows in all parts of the country, though properly a native of the mountains. Almost every kind of timber found in Hindostan is produced in the southern parts. Fir grows in the mountains, and turpentine is extracted from it."

It has many other sources of wealth. As to its conquest by Britain, M. Malte Brun (who wrote in 1818,) did not then seem to contemplate it. He says: "In its present state this empire is a very desirable barrier between the British and Chinese governments; being too weak to offer serious molestation to a powerful neighbour, and too inhospitable (its government and manners,) to afford temptation to an invading army. It is now (1818,) like the deserts that separate the Chinese from the Russian dominions. If this is an advantage to the repose of a great portion of the world, humanity must regret that it assumes this character, by giving rise to so large a portion of misery and desolation within itself."

Very different circumstances now exist, and if the St. Helena (via et T.) accounts be correct, a new field is open to Great Britain. The inhabitants differ widely from those of Hindostan. They have groaned

* An American Farmer, vol. 7, p. 301.

under the most horrible tyranny: "The king taking the tenth of produce and imports." "The riches actually in possession of this monarch must be immense, but how heavily must the wheels of commerce move, and how low, comparatively, must the scale of national wealth and power stand, when maxims so narrow and absurd fetter every part of the machine." Hence we see how great a difference between the character of Hindostan and Birmah. There is a meekness in the former loudly calling for a respect being had to their prejudices; as well as an order and decorum in their deportment. And the question will perhaps be, whether, after such a government has been suppressed, the very Burmese as well as the Hindostanese, but from a different motive "will not always be ready to serve with exclusive fidelity the power that pays them most punctually and most liberally." With this kind of conduct, it is to be recollected, is generally connected good government.

In fine, perhaps such circumstances may arise as to lessen the difficulties thus contemplated by this admirable writer, (p. 859.) "Yet perhaps the most sanguine political Quixote would find it a difficult task to sketch, even in theory, a plan on which the Birman Empire could be put into possession of the blessings of political and civil prosperity, consistently with the maintenance of a liberal and safe line of conduct on the part of its regenerators." A strong and determined system may be established. Firmness and power can overcome any thing. When the Duke of Abrantes went into Lisbon, the Portuguese began to assassinate his troops. He issued an order, and declared that if any soldier was killed, he would enfilade the streets, and shoot every Portuguese he found in the streets after a certain hour. There were no more killed.

BEANS.

[From the New England Farmer.]

The only species of beans much used in this country, is that which in England, is called *Kidney-Bean*, and in France, *Haricot*; (*Phaseolus vulgaris*.) The bean of English writers, is what is commonly called here the *Horse-Bean*, (*Vicia faba*.) Considerable confusion has arisen from the indiscriminate use of the term bean, applied as it is, by some good American writers on agriculture, to two very distinct genera or sorts of plants. The horse-bean (*vicia*) being tap-rooted, is much used in England as a fallow crop; and probably might be advantageously introduced here. White kidney-beans are almost the only kind used for field culture at present. They require dry land that has been tilled with care, so as to destroy the weeds; and of such fertility as would produce a moderate crop of Indian corn. Poor sandy soils, or gravelly loam, will produce them; provided the beans are wet and rolled in plaster before planting. They can be planted in hills, or drills, the rows two and a half or three feet apart, according to the strength of the soil, and ploughed and hoed like other hoed crops. The time of planting is the same as Indian corn. Hog-dung mixed with ashes, is said to be the best manure for them. The hills should be from fourteen to twenty-four inches apart, according to the soil. They must not be so thick as to preclude the sun and air. Five beans will be sufficient to remain in a hill.

When about two thirds of the pods are ripe, and before the frosts, pull and spread them in rows; but they must be turned occasionally at mid-day, that the dampness of the ground may not mould those underneath. After thrashing, if there are any unripe ones which require more drying, spread them on a clear floor, under cover, till they are thoroughly dried.

White beans will yield from ten to forty bushels in the acre, twenty bushels of which will yield

They are valuable for the table and for stock, particularly for sheep and hogs.

BUSH BEANS.

It is a great object to have beans early, and they should be planted as soon as the ground is warm; but it is useless to plant them when the ground is cold.—A principal crop should be planted early in May, and successional crops, about the middle, and also towards the end thereof. For the early kinds, select a piece of light rich ground; let the drills be made about two feet and a half asunder, and an inch and a half deep; drop the beans therein, and at the distance of 2 or 3 inches from one another, and draw the earth evenly over them. As soon as they are in full bloom, and the lower pods are beginning to set, the tops or runners should be cut off; this will greatly promote the swelling of the pods, as well as their early maturity. But with respect to small early beans, if you would have them come in as soon as possible, top them when the blossoms at the bottom of the stalks begin to open.

POLE BEANS.

For beans whose vines need support, let poles of a proper height be fixed in the ground about 2 feet apart, in rows 3 or 4 feet distant from each other—around each pole let 4 or 5 beans be planted; the poles should have small knots left on them, or pins put through to support the vines. This way of planting gives an opportunity of keeping the soil loose around the roots and prevents the injuries arising from driving poles into the hills. Of the various sorts of pole-beans one planting is enough; for, if you gather as the beans become fit for use, they continue bearing all through the summer, especially the Lima bean, which delights in heat, and which should not be planted till the ground is quite warm. The scarlet bean (*multiflorus*) is well worth cultivating, both for use and ornament.

BEETS AND CARROTS.

They should be sowed in drills $\frac{1}{2}$ of an inch deep, and 20 inches apart; if carrots are in drills but 16 inches apart and half an inch deep, it is about as well. The ground prepared and the seed raked in as for onions.

MELONS, CUCUMBERS AND SQUASHES.

They should be planted about the middle of May. Cucumbers for pickling may be planted the middle of June. The hills may be 3 or 4 feet apart. The ground should be as well prepared as for onions; and they must be hoed three times before the time for vines to run. Afterwards pull out the weeds.

RURAL ECONOMY.

PYRAMIDAL HIVE.

[Translated from the French by Col. Dinsmore, of Alabama.]

A simple and natural method to perpetuate the families of the bees and to obtain from each hive, every autumn, a full panier of wax and honey, without destroying bee, or larva, besides numerous swarms; with the art of usefully restoring, at the return of spring, the hives where the bees have died in the autumn, winter, or spring, by hatching the eggs remaining in the cells; the art of converting honey into pure white sugar, hydromel syrups, &c. &c. a work useful to all country farmers—by P. Ducoëdic, president of the canton of Maure, department of Ille and Vilaine; ornamented with engravings.—*Latitiam, Laudem, Copiam hinc spirare coloni*.—Paris, 1813.

The pyramidal hive or the hive La Bourdonnaye, improved by a third panier or box.

SEC. 1st. Of the invention of the pyramidal hive. From the earliest antiquity, the amateurs of bee raising, have formed different systems for the management of these insects; but, as yet, no one has

found the mode of plundering their annual products, without destroying them, in whole or in part.

To this day, in fact, no one has found out the means of annually plundering these precious insects, without the predetermination of a total or partial destruction; such are the expedients of the smoke of sulphur, of wet burnt rags and driving, all of which destroy at least three fourths and often the whole, not only of the living bees, but their young. Finally, after a careful observation on the instinct and architecture of these insects, and following methodically, the directions of M. de La Bourdonnaye, in the management of his hive, I discovered the whole secret of nature, by which I can every year obtain a complete harvest of the products of bees, without causing them the least prejudice.

When the bee in its wild state selects a retreat, in the hollow of a tree, or cleft of a rock, which affords room, it always fixes on the highest part of that hollow, or cleft, to build and suspend its combs. These edifices fastened and suspended the one to the other, always executed from the top downward, and never from the bottom upward, are continued downward, as long as the bee finds room below his first constructions.

In thus descending in their labours, constantly, and invariably, the bees abandon their first constructed combs above, and begin a second tier below, in which the queen mother, having also descended, makes her new deposit of larva, under the safeguard of the whole family. Thus there are no more bees in the upper combs, and in the second year they are clear, not only of bees, but of eggs, and entirely filled with honey.

Such is the habit of bees in their wild state, and such is it also in their domestic state, by their instinct, they build from the top downward, always descending from the upper to the lower combs; precisely in this manner should we learn to plunder them without injuring them, without smoking, castration or driving, &c.

If we intend to rob bees which are lodged in a hollow tree, or a cleft of rock, it can be done without difficulty, and in perfect safety, by taking the upper combs, while the swarm which has abandoned them, are engaged in continuing their labours below. The bees do not even perceive the robbery, nor do they suffer by it, because the upper combs with their store of honey, have become a superfluity, on account of the new provisions which they continue to accumulate in the stores which their instinct inclines them to build, successively descending without interruption.

In the same manner as wild bees work, in hollow trees, or rocks, always downward, so do the domestic bees in the hives or cases which inclose them, always commencing their labours at the top of the hive, to which they suspend their combs and work downward.

Here is the whole secret of nature unveiled for the robbery of bees without injuring them. It is easy to employ the art (which we have already noticed) of robbing wild bees, to the trick of using three stories, or three cases, placed each succeeding spring, one under the other, to form the pyramidal hive, of which the highest story or upper case, without young bees or larva, will be every succeeding year at the disposal of the proprietor; because the bees have abandoned the upper story, continuing their industry and labours by descending into the lower cases or boxes, where the queen mother will always be found fixed with her living family and her eggs.

This secret, snatched as it were from nature, by the first exertions of M. de La Bourdonnaye, whose steps I have only followed to complete his plan, is within the reach of every class of cultivators. It is only necessary each spring, to put a box or case under the simple hive, that after the bees have filled the first box they may descend into the second, to con-

tinue their labours. In the second spring you will put a third case or box under the before mentioned two, and in the autumn, take off the upper one. You will then have a perpetual routine of putting a new case each spring, under the two which remained, during the autumn and winter, on the bench, and taking off the upper one in autumn.

This method, drawn from nature, is infallible; the upper is always filled with wax and honey, without young bees, or eggs, and without filth of any kind. The whole family has gone down from the first box or case into the second, which will become the upper box as soon as the first is removed. The queen mother, her family, and all her eggs, or larva, are in the second box or story, and, if the season be very favourable, it often happens that they begin to work in the lowest box.

The upper case, which is taken off, generally contains pure virgin honey, formed in the spring of the same year in which it is taken, for the bees commonly consume, in autumn and winter, the honey of the preceding year.

Every cultivator can easily convert this honey into a sugar, equal to white Havana sugar, and it is as easily refined as the sugar made of cane, and will become a new article of commerce, with which the markets of our towns will soon be supplied.

The pyramidal hive is already known and in use, in divers parts of the empire, but principally in the departments of Bretagne, of Seine, Seine and Marne, Seine and Oise, of Oise, Yonne, Manche, Calvados, Sarthe, Nord, &c. &c. This method will soon become general, because it is simple and easy. Then why should we not use the means of converting this honey into sugar, which requires no more art than to preserve the families of the bees themselves? By the same attention we should attain the success and results.

Imitation and habit is every thing. If this art, which is so easy of increasing the products of our bees, of preserving their families, and converting the honey into sugar, was introduced into our rural communes, why should we not, in a short time, see our peasants coming to market with loaves of refined, and sacks of unrefined sugar of honey, as we now see them coming with butter, cheese, milk and fruits?

If our modern Luculluses; if those interested in the commerce of the sugar of cane, disdain the use of sugar of honey as too common, more than nine tenths of the inhabitants of the empire would prefer its use. What is better, supposing we had, as formerly, the facility of procuring the sugar of the cane, the prudent economist will distinguish the enormous difference in price between the foreign sugar and our indigenous sugar. The hospitals, the country farmers, and the second class of city inhabitants will use the latter in preference, because it will produce the same results at a price infinitely more accessible.

Again—This was the sugar of our ancestors before the discovery of America; and under our first dynasties, the product of bees formed the most considerable branch of the revenues of the state.

The grand superintendent of bees in France (Le Grand Abeiller de la France,) that is, the minister set over the police and general receipt of the considerable products of this rich part of rural economy, was always one of the most important personages of the government.

LADIES' DEPARTMENT.

HINTS FOR MOTHERS,

For the Improvement of Early Education, and Nursery Discipline.

(Continued from page 79.)

TRUTH AND SINCERITY.

Nothing, perhaps, is more beautiful, or more rare, than a character in which is no guile: Guile insi-

uates itself into our hearts and conduct to a degree of which we are little aware. Many who would be shocked at an actual breach of truth, are, notwithstanding, far from sincere in manner or conversation. The mode in which they speak of others, when absent, is wholly inconsistent with their professions, to them, when present. They will relate a fact, not falsely, but leaning to that side which tells best for themselves; they represent their own actions in the fairest colours; they have an excuse ever ready for themselves, and, too often, at the expense of others. Such conduct, if not coming under the character of direct falsehood, is certainly a species of deceit, to be severely condemned, and strictly guarded against, not only in ourselves, but in our children: for we shall find them early prone to art, and quick in imbibing it from others. It is not enough, therefore, to speak the truth, our whole behaviour to them should be sincere, upright, fair, and without artifice; and it is experience alone that can prove the excellent effects that will result from such a course of conduct. Let all who are engaged in the care of children consider it a duty of primary, of essential importance, never to deceive them, never to employ cunning to gain their ends, or to spare present trouble. Let them not, for instance, to prevent a fit of crying, excite expectation of a pleasure which they are not certain can be procured; or assure a child that the medicine he must take is nice, when they know to the contrary. If a question be asked them, which they are unwilling or unable to answer, let them freely confess it, and beware of assuming power or knowledge which they do not possess; for all artifice is not only sinful, but is generally detected, even by children; and we shall experience the truth of the old proverb, "a cunning trick helps but once, and hinders ever after." No one who is not experimentally acquainted with children, would conceive how clearly they distinguish between truth and artifice; or how readily they adopt those equivocal expedients in their own behalf, which, they perceive, are practised against them.

Great caution is required in making promises, and in threatening punishment; but we must be rigid in the performance of the one, and in the infliction of the other. If, for example, we assure a child unconditionally, that, after his lessons, he shall have a top or a ball, no subsequent ill behaviour on his part should induce us to deprive him of it. Naughty or good, the top must be his; and, if it be necessary to punish him, we must do it in some other way than by breach of engagement. *For our word, once passed, must not be broken.*

We should labour to excite in children a detestation of all that is mean, cunning, or false; to inspire them with a spirit of openness, honour, and perfect honesty; making them feel how noble it is, not merely to speak the truth, but to speak the simple unaltered truth, whether it tell for or against themselves; but this we cannot effect, unless our example uniformly concur with our instructions. We should teach them not only to confess their faults, but to confess them fully and entirely, without pre-
facing them by any excuse, or by any attempt to lessen their own offence. When referring to their own faults, let them say, "I have done wrong," or "I have been naughty," and not "I have done a little wrong," or "I have been a little naughty."

the mind in early life, and children reminded that not only duty but a sense of honour should lead us to speak of others in their absence as we would do in their presence.

The confusion and undesigned inaccuracy, so often to be observed in conversation, especially in that of uneducated persons, proves that "truth needs to be cultivated as a talent as well as a virtue," children require not only to be *told* to speak the truth, but *taught* how to do it. To this end, it will be highly beneficial to accustom them gradually and by continued practice, to give an accurate account of what they have read or seen, and to relate correctly circumstances in which they have themselves been engaged; for this perspicuity and precision are commonly the result not only of good principle but of intellectual cultivation. Dr. Johnson observes, "Nothing but experience can evince the frequency of false information;—some men relate what they think as what they know; some men of confused memories and habitual inaccuracy ascribe to one man what belongs to another, and some talk on without thought or care. Accustom your children, therefore, to a strict attention to truth, even in the most minute particulars; if a thing happened at one window, and they, when relating it, say that it happened at another, do not let it pass, but instantly check them; you do not know where deviation from truth will end. It is more from carelessness about truth than from intentional lying, that there is so much falsehood in the world."

On no account whatever let any thing be said or done in the nursery that Mamma is not to be told.

In case of any unpleasant occurrence, it is the duty of a nurse to take the earliest opportunity of informing her mistress; and to do this, when she can with propriety, in the presence of the children. She is ever to enforce the same habit among them, encouraging them, if they have met with an accident, or committed a fault, at once, (for in these cases, delays are dangerous,) to go to their mother, and freely to confess it to her.

It is desirable, as far as possible, to manifest confidence in the honour and veracity of children; for we should wish deceit and falsehood to be considered among them as offences of which we do not even suppose them capable; to accuse a child falsely, breaks his spirit, and lowers his sense of honour. If we have, at any time, reason to suspect a child of telling a falsehood, or of concealing the truth, great caution is necessary in betraying that suspicion. We should endeavour to ascertain the fact by our own observation, or the evidence of others, rather than by the common expedient of questioning the child himself, or strongly urging him to confession; for, in so doing, we shall often lead him, if he be guilty, to repeat the falsehood; or, if innocent and timid, to plead guilty to a fault which he has not committed. Besides, no small care is necessary that we do not bring children into temptation, or put too much to the proof their still weak and unformed principles. There are many suspicious cases, the truth of which being buried in the breast of a child, cannot be discovered; and these it is generally easier to leave unnoticed; at the same time, the mother should be careful not to offend, and treating

ceiving her, let her say nothing to him at the time, but apply, without his knowledge, to the mother, should her suspicions be confirmed, the child is convicted, and the opportunity is at once afforded for reproving and correcting him with decision.

If we have grounds for supposing a child guilty of some common offence, although, as has before been remarked with regard to falsehood, it is better to ascertain the truth by evidence, rather than by the forced confession of the suspected party: yet, sometimes it may be necessary to question the child himself. This must be done with great caution, not with the vehemence and hurry so commonly employed on such occasions; but with calmness and affection. We should forbid him to answer in haste, or without consideration; reminding him of the extreme importance and happy consequences of truth: of our tenderness towards him, and willingness to forgive, if he freely confess his fault, and show himself upright and honourable in his conduct; for truth being the corner stone of practical goodness, we must be ready, when necessary, to sacrifice to it less important points; and, for the sake of this leading object, to pass over many smaller offences.

I cannot close the subject before us without a warning against a severe, repulsive, disheartening, or satirical system, in the management of children. Nothing is so likely to produce in them, especially in those of timid dispositions, reserve, pusillanimity, and duplicity of character. On the other hand, good discipline will greatly promote habits of integrity and openness. But it is to be remembered, that the best discipline is always combined with freedom, mildness, sympathy, and affection.

(To be continued.)

SPORTING OLIO.



NEW-YORK UNION COURSE RACES.

First Day.

Tuesday, 23d.—The regular races for the purses offered by the association commenced, and the 4 mile heats for \$500 were contended for by Count Piper, (a favourite among northern sportsmen,) by Marshal Duroc, and Jennette, full sister to Sir Charles, who encountered Eclipse over the Washington course. It was a beautiful race—well contested—they were repeatedly collared and several times passed each other, and the heats were won by Count Piper by about a length and half each heat.

Time of the first heat 7 m. 56 seconds.

Second heat 8 m. 16 seconds.

The course was considered by the Judges, as several seconds worse than at any of the former runnings.

Second Day.

The horses entered, were Jackson's Eclipse Con Golden's Rattler, Abbot's Half-Moon, and Laird's American Boy,—3 mile heats. The race was won with ease by American Boy, in two heats—1st heat 6 minutes—the 2d heat in 6 minutes 30 seconds.—Rattler and Half Moon distanced in the second heat. American Boy is half brother to Count Piper, the 4 mile heats yesterday, and won. We understand Jennette, with whom the Count contended has been purchased by a gentleman in this city.

Third Day.

Yesterday was the last day of the racing season at the Union Course. Four heats were started for the purse, \$400, in 3 mile heats, viz. Mr. Jackson's Fox, N. Snap, Mr. Van Sickle's Snap, and Mr. Laird's horse. The 4th heat was won by Snap.

tor took the purse in two heats. Time, first heat, 5 minutes 58½ seconds—second heat, 5 minutes 54 seconds.

At the auction sale on Tuesday last at the Union course at Jamaica, of the late gen. Coles' stud, Sportmistress, the dam of the Arabian that won the match on Monday, was sold for 1200 dollars. The Arabian colt out of Dove, which is to run a match a fortnight hence, brought seven hundred dollars. Sportmistress is the dam of Mr. Stevens' fine horse Trouble, by Duroc. Sportsman, we understand, having been matched after his race, was not sold.

[N. Y. Pa.]

DESCRIPTION OF A GOOD HORSE.

Sir—From an apparently very old work of 500 pages, the date of its publication being torn out, I send you an extract, descriptive of a good horse. The title of the book is, "Directions for hunting and killing all manner of chase used in England, with the terms of art belonging thereunto, also, a short account of some peculiar beasts not usually hunted in England, by Nicholas Cox."

I am, &c.

T. E. W.

"His head ought to be lean, large, and long; his chaul thin, and open; his ears small, and pricked, or if they be somewhat long, provided they stand upright like those of a fox, it is usually a sign of mettle and toughness. His forehead long and broad, not flat, and as we term it marefaced, but rising in the midst like that of a hare, the feather being placed above the top of his eye, the contrary being thought by some to betoken blindness. His eyes full, large, and bright. His nostrils wide, and red within, for an open nostril betokens a good wind; his mouth large, deep in the wykes and hairy; his thropple, weasand, or windpipe big, loose and straight, when he is reined in by the bridle; for if, when he bridles, it bends in like a bow (which is called cock throppled) it very much hinders the passage of his wind. His head must be set on to his neck, that there must be a space felt between his neck and his chaul; for to be bull-necked is uncommonly to sight, and prejudicial to the horse's wind. His crest should be firm, thin and well risen; his neck long and straight, yet not loose and pliant, which the Northern men term withy cragged; his breast strong and broad, his chest deep, his chine short, his body large, and close shut up to the huckle bone; his ribs round like a barrel, his belly being hid within them; his fillets large, his buttocks rather oval than broad, being well let down to the gascoins; his cambrels upright, and not bending, which is called by some sickle houghed, though some hold it a sign of toughness and speed. His legs clean, flat and straight: his joints short, well knit, and upright, especially betwixt the pasterns, and the hoofs, having but little hair on his fetlocks: his hoofs black, strong and hollow, and rather long and narrow than big and flat, and lastly his mane and tail should be long and thin, rather than thick, which is counted by some a mark of dullness."—On the subject of colour he says— "I dare pass my word, that wherever you shall meet with an horse that hath no white about him, especially in his forehead, though he be otherwise of the best reputed colours, as bay, black, sorrel, &c. that horse hath a dogged and sullen disposition, especially if he have a small sunk eye, and a narrow face, with a nose bending like a hawk's bill."

[To whomsoever we are indebted for the above extract—the editor will thank him for the loan of the book.]

BOAT RACE.

According to public notice the race between the boat Gen. Jackson, belonging to the ship Mentor, of Philadelphia, and the Charleston boat Razor, took place on Friday afternoon. A few minutes after five, the boats started from opposite the south

point of the battery, when the Razor shot ahead at the first moment of starting, and pursuing the advantage she had gained, passed the Judge's boat off Gadsden's wharf, better than three minutes before the Gen. Jackson, and leaving her at a distance of between 2 and 300 yards in the rear. On the return the Philadelphia boat did not reach the starting point until 5 and a half minutes after the Razor.

The distance passed over is better than 3 miles; which the Charleston boat passed in about 26 minutes, her oarsmen giving 42 strokes to a minute, whilst the Gen. Jackson's gave but from 26 to 27.

The success of the Charleston boat, (a clinker built skiff) was pronounced as soon as she was seen—her make giving much advantage over the Gen. Jackson, which is a ship's quarter boat. The interest of the race was therefore diminished on account of the ease with which the former obtained the victory.

[Charleston paper.]

RECIPES.

TO MAKE VINEGAR.

J. S. SKINNER,

May 18, 1826.

Sir—As the proper season for making Vinegar is now at hand, I send you a receipt which I know from experience to be a cheap and very easy way of making it for those who have no orchards, and perhaps may prove useful to some one of your numerous subscribers, if you think it deserving a place in the columns of the American Farmer. To every ten gallons of rain water add one gallon of molasses, and one of brandy, mix them well together, and place the cask in a garret or some warm dry place, and occasionally shaking it in a few months it will be fit for use. Yours, &c.

ROBERT STEPTOE.

TO ESCAPE THE EFFECTS OF LIGHTNING.

It is particularly dangerous to stand near leaden spouts, iron gates or palisadoes, at such times; metals of all kinds having so strong an attraction for lightning, as frequently to draw it out of the course which it would otherwise have taken.

When in a house, avoid sitting or standing near the window, door, or walls, during a thunder storm. The nearer a person is to the middle of a room, the better.

The greatest evil to be apprehended from lightning, is the explosion of powder-magazines. These may, in a great degree, be secured from danger by insulation, or by lining the bulk, heads and floorings, with materials of a non-conducting nature, the expense of which would not be great.

POETRY.

ON INDOLENCE.

The following lines are requested to be inserted in the American Farmer, as being worthy of an honourable place in some one of its columns. B.

From the New England Farmer.

THE SLEEP OF THE SLUGGARD.

By Thomas G. Fessenden.

O list to an indolent lump of live lumber,
Whom slothfulness binds with invisible bands,
"A little more sleep, and a little more slumber,
A little more folding together the hands.

"I've a villanous cold—and my head—how it aches!
The north wind is blowing, and stings like a hornet,
And as to this rising as soon as day breaks,
'Tis a vile vulgar habit, and gentlefolks scorn it.

"I'm none of those wretches who labour for bread,
Through foul or fair weather, whatever may hap,
I mean to enjoy both my table and bed,
And so I'll turn over and take t'other nap.

"I've money enough, and can live at my ease,
I cannot be caught in necessity's trap,
I'll sleep every day till the next if I please,
And so I'll turn over and take t'other nap."

His heavy hydropsical carcase he turns,
And sinks in uneasy intemperate rest,
Till dim in his bosom the lamp of life burns,
While snorting with night-mare and plethora prest.

What horrible visions his bed hover o'er,
The phantoms of spleen and the blue devils dire!
Like Gorgons and Hydras of fabulous lore,
And red dragons vomiting rivers of fire!

Now he clings to the side of a prominent steep,
O'er a rough roaring cataract hangs by a hair,
Now suddenly sinks in a bottomless deep,
And starts half awake, with a shriek of despair.

Thus he rolls like a porpoise, o'er billows of down;
Grows big as a mammoth and fat as a seal;
Lives a plague to his friends or a charge to the town,
And dies to make worms a most plentiful meal.

Ye sons of Columbia, shun the syren of sloth:
For if you submit to her leaden control,
You'll find, when too late, like a venomous moth,
She eats up the substance, and poisons the soul.

If the wizard of indolence takes you in hand,
Quick break from his grasp, or you're quickly undone,
Your limbs will be lithe as a wickapy* wand,
And your sinews be softened, like wax in the sun.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 2, 1826.

THE CATTLE SHOW.—We must, from necessity, defer all notice of the Cattle Show until the next week.

ICE HOUSES.—*Quere:* Can any body speak, from experience, of the practicability of constructing a house above the surface, or nearly so, for the preservation of ice, in a situation so low, that on digging to the depth of three or four feet, the water is raised? For persons so circumstanced we wish the information, as to the most economical method of constructing such an house. Opinions will be acceptable, but more so as they may be founded on facts and experience.

DIVIDENDS ON PUBLIC STOCKS.—A respected correspondent suggests, that it would be useful to publish in the American Farmer, regularly, the dividends which may be declared on the different kinds of public stock; on the ground that a great number of farmers own stock, some in one institution, and some in another; and he intimates that these institutions might be got to select the American Farmer as one of their mediums of publication. On the above, we have only to remark—first, that we are glad to hear that any considerable portion of our friends own a little of the "ready." A few hundred dollars of dividend come in very well to buy plaster, groceries, &c., let the farm be never so productive. We are, however, of opinion, that the country banks have been ruinous to the agricultural interest. We thought so at the time the Farmers' Bank of Maryland was established, so far as we were then old enough to think upon the subject. But to return: it is no object with us to insert advertisements for pay. It is sufficient for us that an advertisement conveys useful or desirable information to a considerable portion of our read-

* Wickapy is the popular name for a shrub which is remarkably flexible.

ers, to induce us to insert it *gratis*—and again we wish not to interfere in any department with *news-papers*. Finally, we will publish with pleasure all notices of dividends of stock, together with the prices at the time, when furnished by any institution or individual, and supposing that these notices will in no case exceed a few lines.

CIRCULAR TO POST MASTERS.

Post Office Department, 27th May, 1826.

SIR,—Complaints have been lately made of the delay, and sometimes loss of newspapers sent by mail. These may be attributable, in some cases, to the careless manner in which papers are prepared for the mail; but, in others, they are believed to arise from the inattention or design of post masters. It is feared that some of them are so forgetful of their duty, as to consult the convenience of contractors on horse routes, by retaining a part of the packets when the mail is so large that the usual number of bags cannot contain it. Others, it is said, being more culpable, retain newspapers to read them. A moment's reflection must convince every post master, guilty of either of these charges, that he trifles with the obligation imposed by his oath of office, and should be held responsible for such gross violation of duty.

Publishers of newspapers and their subscribers, as well as post masters, are requested to report to the Department all irregularities in the reception of papers forwarded in the mail, and an assurance is given, that where the irregularity shall be proved to have been produced by the negligence or design of any contractor, post master, or clerk, the most effectual steps shall be taken to prevent its recurrence.

It is often of as much importance to the public, and always as essential to the reputation of the mail, that newspapers should be as speedily and safely transmitted, as letters; and an individual who is inattentive to the former, is unworthy of being trusted with the latter. He is a stranger to that high incentive to duty, which arises from an ardent desire to elevate the character of the Department, by giving the utmost efficiency to its operations.

In the Post Office law, it is provided, that "if any person employed in any department of the post office, shall improperly detain, delay, embezzle, or destroy, any newspaper, or shall permit any other person to do the like, or shall open, or permit any other person to open, any mail or packet of newspapers, or shall embezzle or destroy the same, not being directed to such person, or not being authorized to receive or open the same, such offender shall, on conviction thereof, pay a sum not exceeding twenty dollars for every such offence."

At all offices where newspapers are mailed, post masters should see that they are properly put up and directed. None should be forwarded in the mail, except such as are secured by a substantial envelope, and have a legible superscription.

If this injunction were strictly observed, the number of failures would be greatly reduced.

Under no circumstances, should any part of the mail be left on a route short of its destination. This may always be avoided, by post masters at the important offices, keeping one or more extra mail bags.

I am, very respectfully,
Your obed't serv't,

JOHN McLEAN.

Printers will confer a favour on the Department, and probably promote their own interest, by publishing this circular.

COMMERCIAL RECORD.

the arrivals on Saturday afternoon and yesterday, we have received a great variety of foreign

journals, but their contents have been mostly anticipated. In the Liverpool Courier of the 19th of April, we find the following comparison of the prices of cotton:

Present prices, compared with the lowest point ever before known.

	12th April, 1826.				7th Sept., 1822.			
	s.	d.	s.	d.	s.	d.	s.	d.
Sea Island, 1	2	a	2	0	0	10	a	1
Upland, 0	5	1	a	0	0	5	1	a
Orleans, 0	6	4	a	0	0	6	a	0
Pernam., 0	9	1	a	0	0	9	1	a
Maranh., 0	9	a	0	9	0	8	1	a
Surat, 0	4	1	a	0	0	6	a	0

By a circular which we have now before us, it appears, that the import of cotton into the country in 1810 to January 1, 1811, was 304,800 bags, and that the price of Bowed ruled between 1s. 3 $\frac{1}{2}$ d. and 1s. 10 $\frac{1}{2}$ d., making an average of 1s. 7d. per lb.; that Maranhams ruled betwixt 1s. 9d. and 2s. 3d.; being an average of 2s. during that year of extreme distress. From the above table it appears, that the lowest point of depression to which cotton ever fell, before the present year, was in September, 1822; and the present year exhibits the lowest price to which cotton has ever fallen in the commercial history of the country. The stock of cotton in the ports of London, Liverpool, and Glasgow, on the 1st of the present month, may be estimated in round numbers at 390,000 bags, which is 84,000 bags more than that of 1811, and is, at present prices, worth but little more than three millions sterling.

[N. Y. paper.]

SINCLAIR & MOORE

Have now for sale, at their Agricultural Repository, Pratt street, Baltimore, *Harvest tools*, viz.

200 Grain Cradles, with the best English or American Scythes, of the most approved patterns, and are made of different kinds, suitable to the different sections of the country—and as we have been improving on them for three years, we believe they will be generally approved of.

50 dozen Grass Sneads, a part of which have the Scythes hung to them ready for work. Also, Scythe Blades for grain or grass.

50 dozen of the Spring Steel Hay and Manure Forks, so generally used in the Eastern States.

200 Cultivators, for the cultivation of corn, tobacco, and garden vegetables, answering all the purposes of the plough at one-third of the expense, if judiciously used—and also suits well for seeding wheat, if the grass has been kept down.

100 of those highly approved Wheat Fans are now in progress, and will be ready to deliver as orders may come in, a few of which are made stronger and better adapted to large farms; will cost about \$5 more.

In a few weeks we expect to have an assortment of Turnip Seed, raised from turnips carefully selected from such kinds as we most approve of for table use: such as the White Flat, White Stone, Yellow Scotch, and Early Dutch; and have lately received from London, some of the Red-topped Swedish, or Ruta Baga Turnip seed, which we have proved to vegetate well; together with a very extensive assortment of Garden Seeds and Implements of Husbandry.

Buck Wheat and Millet Seed, would be purchased.
June 1, 1826.

CONTENTS OF THIS NUMBER.

Proceedings of Quarterly Meeting of Pennsylvania Agricultural Society—Sheep Husbandry, origin of Mr. Dickinson's flock of Saxony-Merino Sheep—Hessian Fly and Weevil Fly, to prevent their devastations—Prospect of Crops—Silk Worm—Essay on the Culture of the Grape Vine and making Wine, by Thomas McCall, concluded—Large Asparagus, with engraving—Angola Pea—Bush and Garden Beans, Beets, Carrots, and Melons—Improved Pyramidical Hive for saving Honey, from the French—Hints for Mothers for the Improvement of Early Education, on Truth and Sincerity—New York Union Course Races—Description of a good Horse—Boat Race in Charleston—Recipes—Poetry, on Indolence—Editorial—Circular of Post Master General.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	7 50	8		
BACON, and Hams, . .	lb.	5	8	9	12
BEES-WAX, Am. yellow	—	33		50	
COFFEE, Java,	—	17		22	25
Havana,	—	17			29
COTTON, Louisiana, &c.	—	13	14		
Georgia Upland, . . .	—	10	12 $\frac{1}{2}$		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	12			14
CHEESE,	—	8	10	12	15
FEATHERS, Live, . .	—	30	33	37	
FISH, Herrings, Sus.	bbl.	2 25			
Shad, trimmed, . .	—	7 00			
FLAXSEED, Rough, . .	oush	75		87 $\frac{1}{2}$	
FLOUR, Superfine, city,	bbl.	4 12		5 00	6 00
Fine,	—	3 75	4 50		
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	67	70		
Wheat, Family Flour,	—	85	90	95	
do. Lawler,	—	50	75		
do. Red,	—	83	87		sales
Rye,	—	68			
Barley,	—	80			
Clover Seed, Red . .	bush	3 87 $\frac{1}{2}$	4 25	4 75	
Ruta Baga Seed, . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	2 25		3 00	
Oats,	—	55	56		
Beans, White, . . .	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	15		25	
HOGS' LARD,	—	7	8	12	
LEAD, Pig	lb.	6 $\frac{1}{2}$		8 $\frac{1}{2}$	
Bar	—	8		8 $\frac{1}{2}$	
LEATHER, Soal, best,	—	23	24		
MOLASSES, sugar-house	gal.	45		62 $\frac{1}{2}$	75
Havana, 1st qual. . .	—	27 $\frac{1}{2}$	28	37 $\frac{1}{2}$	
NAILS, 6a20d. . . .	lb.	6 $\frac{1}{2}$		9	
NAVAL STORES, Tar, .	bbl.	1 25	1 38		
Pitch,	—	2 25			
Turpentine, Soft, . .	—	1 50			
OIL, Whale, common, .	gal.	31	33	40	
Spermaceti, winter .	—	80		88	
PORK, Baltimore Mess,	bbl	11 00	12 00		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	4 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5 $\frac{1}{2}$	7 $\frac{1}{2}$	8	12
WHISKEY, 1st proof, .	gal.	29	30	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	36		50	
SUGARS, Havana White,	c. lb.	13	13 50	15	16
do. Brown,	—	9 00	9 50		
Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	29
SPICES, Cloves, . . .	—	75		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes, . . .	bush	43	45		
Liverpool Blown . .	—	45		75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 20		2 00	
Lisbon,	—	1 15		1 50	1 15
Claret,	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bld	lb.	35	40		
do. crossed,	—	25	30		unwashed
Common, Country, . .	—	20	23		but free of
Skippers' or Pulled, .	—	25	30		tags.

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AGRICULTURE.

ANNUAL CATTLE SHOW.

For the exhibition and sale of Improved Domestic Animals, Agricultural Machinery and Implements, and Household Manufactures—held by the Maryland Agricultural Society.

[The late Cattle Show and Exhibition of Domestic Family Manufactures, was held agreeably to appointment, at the Maryland Tavern, on Thursday and Friday last.

Truth compels us to say, that with the exception of Horses and Sheep, it was a meagre exhibition. It were useless now to reflect upon the causes of its inferiority, in comparison with previous shows, unless it were done with the view, and in the hope, that by so doing, we might save ourselves the mortification of witnessing such another. With that design and that feeling, we shall, if we can get a leisure moment, take the liberty of making some remarks in the next American Farmer, on the part acted by those to whom the management of the Society's concerns have been committed, with a review of the Reports of the Committees, and the cause of the falling off in the Exhibitions, and the prospects of the society.

It was the more mortifying not to see all the pens well filled, as the society was favoured with the company of several citizens from Washington, holding high trusts, to which they have been elevated by their talents and public spirit. The presence of the chief magistrate would have been gratifying to the society; and but for inability to attend, would have been yielded by him on invitation from the Board of Trustees, as appears by the following correspondence:]

SIR, *Baltimore Post Office, May 26, 1826.*

The Board of Trustees of the Maryland Agricultural Society, have instructed me to invite you to honour with your attendance, their next Cattle Show and Exhibition of domestic family manufactures; to be held near this city on Thursday and Friday next.

I find particular pleasure in being the medium of conveying their wishes on this occasion; and take leave to add the assurance that your presence would be highly gratifying to all the members of the Society, and would be regarded as auspicious to the general cause of agriculture by its friends in every quarter.

With great respect, sir,
I have the honour to remain,
Your obed't serv't,
J. S. SKINNER, Cor. Sec'ry.

J. S. SKINNER, Esq.,
*Corresponding Secretary to the Maryland
Agricultural Society, Baltimore.*

SIR, *Washington, May 31, 1826.*

I pray you to have the goodness to present to the Trustees of the Maryland Agricultural Society, the assurance of my sensibility to their obliging invitation to attend at the Cattle Show and Exhibition of domestic manufactures, and my regret at being unable to avail myself of it. To which be pleased to add my congratulations to the Society upon the success which has attended their exertions to promote the agricultural interest of the country, and my best wishes for its continuance.

Accept my respectful salutations,
JOHN QUINCY ADAMS.

General Charles Ridgely, of Hampton, the President of the Society, being absent, General John Mason, of Georgetown, was requested to preside

for the occasion, and to present the premiums to those by whom they might be won.

After dinner, on the first day of the Show, the Chairman read to the Society the following letter of resignation:

To the Members of the Maryland Agricultural Society:

GENTLEMEN,

When I accepted the Presidency of your institution, which was so honourably conferred upon me, I was animated by the hope that returning health would enable me beneficially to attend to its duties; but the delicate and precarious condition of my constitution admonishes me, that the ardor which I feel for the promotion of the great purposes of your association, cannot be exerted with safety to myself or utility to you; and I beg you to consider my resignation of the office into more efficient hands, as an evidence of the sincerity of my anxiety for your welfare.

To those who are acquainted with my habits and pursuits it is unnecessary to dwell upon the interest and pleasure with which I have ever been impressed, by every reflection flowing from the successful efforts of husbandry; and I am thoroughly persuaded that its prosperity can in no way be more effectually cherished than by well conducted societies. The experience of other countries bears ample testimony to the truth of this assertion: and may I not say that it is in some measure confirmed by our own experience? Has not a spirit of inquiry gone forth among our farmers; are not our systems of cultivation generally improving; is not more attention paid to our stock; have we not better constructed implements of husbandry? Surely we may be permitted to claim some of the credit of these improvements in the agriculture of our country.

From early youth I have attended to its practical and physical results; but experience, as I have advanced in life, has demonstrated the political influence, by which it holds dominion in this favoured land. There is an obvious and a moral fitness in the resemblance between agriculturists and republicans: honesty and independence are alike the indications of both; and although commerce and manufactures are inestimable resources, yet among the firm and sturdy cultivators of the earth, there have ever been found genuine and faithful patriots for the nation. Look at every people from whom good tillage has languished and disappeared; behold the extent of their desolation; some of them have been no less conspicuously blessed in the fecundity and luxuriance of their natural productions, than renowned for chivalry in war and splendor in letters. Happy is it for the delightful regions of these United States, that instead of mines of gold, quarries of gypsum have been discovered, and its influence adapted to their soil; they have encouraged industry and economy, the legitimate progenitors of national wealth and individual prosperity.

Gentlemen, as your President, I must beg you to accept an affectionate and respectful adieu; but as a private member, it will always afford me great pleasure to condescend in any way my health will allow to the welfare and interests of the society.

I have derived both information and amusement from the social meetings of our Trustees, and from the general assembly of farmers. I consider the annual communion of your members as one of the best observances of the institution. It is indeed an edifying spectacle to behold so much union in so good a cause: the momentum of the community mutually supporting its constituent parts; the plain husbandman mingling his intelligence and observation with the researches of the man of science; practical good sense cordially combined with all that is elegant, courteous and refined, exhibits a solid fabric of society adorned with the chastest embellishments—and I am consoled in my pain at parting from you by the consideration that there

are so many gentlemen among you whose eminent sufficiency will enable them to do ample justice to the dignified station of President of the Maryland Agricultural Society.

I have the honour to be,

Respectfully,

Your obedient servant,

C. RIDGELY, of Hampton.

Baltimore, 1st June, 1826.

On motion by Mr. Caton, the preceding letter of resignation from the President of the Society, was referred to a committee appointed by the Chairman—consisting of R. Caton, Tench Tilghman, George Cook, Gen. Stansbury, and Edward N. Hambleton; from whom the following report was received, unanimously accepted, and ordered to be published in the American Farmer:

The Committee to whom was referred the letter of Gen. Ridgely, announcing his resignation of the Presidency of the Society, report—

That as members of the Agricultural Society of Maryland, and they believe they speak the sentiments of every individual of the Society, they sincerely regret it; and more especially they regret the cause which induces this event—his infirm state of health. Your committee are sensible of the zeal and interest which Gen. Ridgely, in his official station as President, has always manifested; and knowing, with others, the wide field of his labours and experiments in agriculture, they feel that the Society has lost an efficient and useful officer; one whose station in life and universal hospitality, gave useful and flattering appendages to the station he filled with so much credit to himself and reputation to the institution. Your committee beg leave in their own names, and in behalf of each individual member, to present their thanks, their acknowledgments, and their respectful regard to Gen. Ridgely for the benefits they have received under his auspices as President, with a sincere wish, that he may regain his health, and continue to the Society his usefulness and his example.

RICHARD CATON,
TENCH TILGHMAN,
GEORGE COOK,
TOBIAS E. STANSBURY,
EDW'D N. HAMBLETON.

FARMS.

The Committee appointed to award the premiums offered for the best farms, respectfully report:

That they award the first premium to Mr. Caleb Dorsey of Caleb, Elkridge, as the proprietor of a farm which, it fully appears to this committee, upon the report of a very competent committee of inspection, has been cultivated with great economy and extraordinary net profit, and in which the permanent improvement, from a state of comparative barrenness, has been very remarkable. (A.)

The farm of Mr. Michael Bartholow, of Pipe Creek, in the opinion of this committee, would be richly entitled to the second premium, had Mr. Bartholow taken care to have complied with the requirements of the society, and obtained a confirmatory description of his farm from the committee appointed for the purpose of visiting all farms intended to be offered for the society's premium—and although this committee may regret that Mr. Bartholow has omitted to comply with this very reasonable rule of the society, they feel that they have no right even to recommend a suspension of the rule in this case; and the more so, as Mr. B. appears to have been well aware of the condition upon which the premiums for farms was to be awarded. It is therefore not in the power of the committee to adjudge the second premium for farms.

J. G. PROUD,
B. J. SEMMES,
CHARLES W. DORSEY,
SAM'L STONE.

June 2, 1826.

(A.)

To the Trustees of the Maryland Agricultural Society.

GENTLEMEN,

Elkridge, May 21, 1826.

Being called on during the present week (in virtue of a power which you have been pleased to confer on us,) to view the farm of Caleb Dorsey of Caleb, on Elkridge, and to report its situation, products, improvements, &c. to your honourable body; we beg leave respectfully to state, that we have discharged the duty assigned us; and find that this farm contains two hundred and forty-seven acres of land; about forty acres of which is in wood, and thirty in timothy meadow; the remaining one hundred and seventy-seven acres being arable land, (for the most part, of what in the neighbourhood is called the gray rock or rotten stone land,) is divided into five fields, the fences, or inclosures around which are in the very best repair. Two of the fields are now in wheat, one in Indian corn, and the remaining two are in clover. The wheat looks well for the season; the Indian corn is clear of all grass or weeds, has been well cultivated, and promises an abundant crop; the clover for the scythe is of a more luxuriant growth than we have this year seen any where else. His live stock are excellent and in high order. This farm, although a few years ago exhausted and sterile, we feel no hesitation in pronouncing now to be in as high a state of fertility and agricultural improvement as any in the State with which we are acquainted. Its management has been marked by the unusual skill, economy and industry of its owner; and his labours have been most richly rewarded by its bountiful productions. In the course of a very few years (comparatively speaking,) he has realized in cash, after supporting his family, and clear of all expenses, more than twice the value of the farm, estimating it \$45 per acre. It is a matter of notoriety, which the neighbouring inhabitants can all attest, that the expense of cultivating this farm has been much less, and its productions much greater, in proportion to its size, than any other in that highly improving part of Anne Arundel county. That some idea may be formed of the fertility and profits of this land, we will take the liberty of stating some of its products and returns for a past year. In the fall of 1824, ninety-three bushels of wheat were sown, on what the undersigned (after a full and careful inspection of the ground,) do not believe can exceed sixty-two or three acres; of which upwards of three-fourths was corn ground. And we are the more confirmed in this belief, from the universal usage of all skillful agriculturists of the neighbourhood, not to sow less than a bushel and a half of wheat to the acre; and from the thorough conviction thereof of the proprietor, derived from repeated sowings and plantings of the same land. From this seeding, Mr. Dorsey in the summer of 1825, reaped 1,809 bushels of wheat; being almost thirty bushels to the acre. Such a yield from a fallow would be nothing remarkable; but, as the production of corn land, it has few precedents. Of this crop of wheat 1,559 bushels have been sold at from 90 to 95 cents per bushel—140 bushels sown, and 150 remain on hand.

In the fall of 1824, from the field of less than ten acres sown in wheat as aforesaid, he gathered upwards of ten barrels of sound corn. In the year 1825, his crop of wheat was saved, he sold 1,809 bushels of wheat, \$352 of beef, and \$150 of corn: he also received for calves, lambs, butter, &c. &c. of fallow ground in wheat, &c. &c. and fifteen acres, &c. &c. in 1826, &c. &c. and seventy bushels &c. &c. and hundred ninety &c. &c.

many of the members of this society now present, as far as they can be presumed to have a knowledge of such facts. With sentiments of the highest respect and consideration, we are, gentlemen,
Yours, &c.

THOMAS B. DORSEY,
THOMAS HOOD,
HENRY WAYMAN.

P. S. Caleb Dorsey of Caleb, cultivated also a small farm of 120 acres, distant three miles from the one afore described.

CROPS.

The committee appointed to award the premiums offered for the best crops, respectfully report:

That they award the first premium on wheat to John Mercer, Esq. of Cedar Park, West River, for the very capital crop of 36 bushels of prime wheat to the acre upon a field of 31½ acres, actual produce, after a loss had been sustained while in the shock, from peculiar causes, which are satisfactorily stated to the committee as making the actual growth of the field to maturity to average nearly, if not quite, 50 bushels to the acre.

To Mrs. Sarah West, of Frederick county, they award the second premium for a very handsome crop of wheat, averaging rather more than 33 bushels from a field of nearly 30 acres.

To Gen. John Mason of the district of Columbia, the committee adjudge the premium for the greatest quantity of Seed Cotton, being a crop of 1092 lbs. of Cotton in the seed from an acre of ground, which for want of seed was so thinly sown, as to induce the belief that the same product would have been obtained with the same seed from ½ths of the acre; a very handsome specimen both in quality and quantity, of what much of the soil of Maryland is probably capable in the production of the great southern staple, and which the committee think is well worthy the attention of Maryland farmers.

The committee had before them a valuable communication from John Mercer, Esq. on the improvement and cultivation of a part of his grounds, with especial reference to his crop of wheat, for which the premium has been adjudged;—and also an interesting letter from F. W. Bordley, Esquire, of the Eastern Shore, on the subject of marl as a manure—both of which documents they beg leave to recommend to the society as being highly useful for publication. (B.)

The committee conceive they would not fully discharge their duties on this occasion, were they to omit the expression of their regret, that gentlemen intending to apply for premiums, should not always think it incumbent upon them to render their testimonials as authentic and satisfactory as possible, and thereby relieve those appointed to award, from that unpleasant feeling in rejecting applications which being duly authenticated, might have been successful, but which they are prevented from admitting, by the positive rule of the society.

field of wheat on my farm during the last year, I have been induced to annex a short statement of its progress to its present state of productiveness, as well to prove the probability of what I verily believe, that its real product was not under 50 bushels per acre, as to illustrate the facility of improving a species of soil, which, under the ordinary treatment of our agriculturalists, is almost a *caput mortuum*, and which abounds on the margin of the Chesapeake and its principal tributary waters. This field was very flat, and of a tenacious, whitish clay, resembling in color and consistency, what is commonly called fuller's earth. In its natural state, there is no soil less productive. The crops are generally destroyed, by the water remaining on the surface in the winter, or perish in the hot and dry summer months, in consequence of its not imbibing the necessary moisture. Frequent attempts had been made to meliorate this land by the use of clover and plaster, but if the seed vegetated early in the spring, it never failed to perish in the ensuing hot and dry weather. In the year 1820, it would not with the best cultivation have produced more than from 5 to 8 bushels of wheat. At that period I met with the tract of General Beatson, on the subject of clay burning, and was led to think that it promised the cheapest, simplest, and most effectual means of rendering that species of soil more open and friable and preparing it for the reception of clover; I accordingly set to work, and burnt a number of kilns, which afforded me as I then supposed about 250 or 300 bushels of ashes to the acre, this was fallowed in, as it was burnt, during the autumn and winter, and corn planted in the spring of 1821, and the product so far exceeded my expectations, that I attributed it in a great measure, to the happy adaptation of the season to stiff soils. In the fall of 1822, I cut off the corn, fallowed it in well, and laid it down in purple straw wheat, the crop was 50 per cent. better than any corn field wheat that I had ever seen on the estate before. In the spring of 1823 I sowed it with sapping clover seed, allowing an unusual quantity of seed, from an apprehension that I should still encounter some difficulty in getting it to take—it vegetated however, and grew off most vigorously, and as my great object was to introduce as much vegetable matter as possible, I carefully abstained from pasturing it after the wheat was taken off. During the winter and spring of 1824, I drew out, upon about 16 acres, or one half of the field, upon which I had previously laid but a small quantity of ashes, in consequence of its being of not so stiff as the other part, about 40 ox cart loads to the acre of oyster shells in a state of decomposition; the clover was as heavy as I ever recollect to have seen any where, and I suffered the whole to fall upon the ground—and about the middle of July commenced fallowing it—here I met with an unexpected difficulty, the mass of clover and shells, so obstructed the progress of the plough, that I found it impossible to proceed in the ordinary way—large masses of clover continually accumulated before the plough and when pushed away upon the furrow slice, were too large to be covered, and thus remaining upon the surface, offered a serious impediment to the harrow, as well as to the seed ploughs—I then attached to each team, two other active hands, besides the one employed to clear the coulter, to push these bundles in the bottom of the furrow, immediately behind the plough, and to prepare the furrow slice, by removing as far as they had time whatever might have a tendency to choke and obstruct the plough—in this way I advanced slowly but did the work effectually—the next operation was to harrow it once, with the furrow, and about the first of October, I commenced seeding it about 1½ bushels to the acre—which was done with Mr. May's furrow harrow plough, having

possible, in order to avoid disturbing the lay. On the 20th June, 1825, I commenced harvesting the above crop—and it may be well, here to remark, that I began to cut this wheat 4 or 5 days at least earlier than my neighbours, and when it was yet so green, that they generally predicted that the grain would shrivel, and the quality be materially impaired, the contrary however was the result, I threshed out a small parcel of 111 bushels the first day's cutting, which weighed 63½ in Baltimore, and 65 in my barn before it was put on board—this difference of weight may be easily accounted for, by the difference in measure, the weather was damp, it was some time on board, and what was shipped for 111, held out 114½ in Baltimore, as will be seen by the certificate No. 2, herewith inclosed. I have said, that I verily believed, that the field did not produce less than 50 bushels to the acre, and will now submit to the committee the grounds of this estimate. It will be seen by the certificate of my manager, attached to that of the surveyor, marked No. 1, that he delivered 1162 bushels of clean wheat, from the 51 acres and 50 perches. Notwithstanding the following losses, of the extent of which the committee can form their own opinion—immediately after harvest, my stock consisting of about 80 head of cattle and horses, broke into the field during the night, and in the morning we found that of 275 large shocks, they had prostrated and torn to pieces upwards of 100. Upon examining their situation, I estimated the loss as at least one bushel to the shock, and to confirm me in this impression, a tenant's cattle subsequently broke in, and tore down 10 shocks in the same way, for which, he readily agreed to pay me the price of a bushel for each shock—again, not much more than one half of the shocks were hauled in and threshed during the summer, and before the ravages of the weevil commenced; the residue was stacked, and remained until September and October, when, from stacks that I expected to yield me from seventy to eighty bushels, I did not get more than an average of 40 of merchantable wheat, there were also several spots about the skirts of the field very much infested with onions, these were cut and threshed out separately, and put with the offal wheat without their quantity being computed, so that I think it may fairly be presumed, that if the crop had been all saved, it would have given an average of 50 bushels. There is one other remark which I would here make to the committee, that I am satisfied that the portion of the field upon which I put the shells, which contains about 16 acres, produced 10 bushels per acre more than that which was improved only with the burnt clay.

I have the honor to be,
With great respect,
Your obedient servant,
JOHN MERCER.

HORSES AND MARES.

The Committee appointed to award the premiums offered for the best stallions and mares, beg leave to report, that they have awarded—

- To Mr. Benj. M. Buck, for his bay stallion Young Top-gallant, 6 years old, as best adapted to get stock for the saddle, the premium of \$15
To Charles Carroll, of Carrollton, Esq., for his bay stallion Badger, (by Exile,) 3 years old, as best adapted to get stock for quick draft, the premium of 15
To Mr. William Price, for his brown stallion, Young Figure, 8 years old, as best adapted to get stock for slow draft, the premium of 15

The committee beg to recommend for the consideration of the Society, that a discretionary premium of \$15 each, be given to Charles Sterett

Ridgely, Esq., for the thorough bred horse Mark Anthony; and to John S. Skinner, Esq., for the thorough bred brown horse Rinaldo—both horses being of the stock of Sir Archy, and bred by the honourable John Randolph, of Roanoke, considered to be of the best blood in our country, and *decidedly the two finest horses exhibited to their view.* The committee are thus induced to recommend these discretionary premiums as being but justly due to those gentlemen for their patriotic exertions in introducing among us those valuable animals for the improvement of our breed of horses.

SAM'L HOLLINGSWORTH,
EDW'D N. HAMBLETON,
CHAS. STERETT RIDGELY,
HENRY HALL,
E. S. WINDER,
THOMAS HOOD.

ON MARES.

The Committee award—

- To Edward N. Hambleton, Esq., of Talbot county, for his thorough bred grey mare Lavinia, 10 years old (by Canton,) as the best adapted to breed stock for the saddle, the premium of \$10
To Wm. B. Stokes, Esq., for his bay mare Beck, 7 years old, as the best adapted to breed stock for quick draft, the premium of 10
To Charles Sterett Ridgely, Esq., for his brown mare Kate, 6 years old, as the best adapted to breed stock for slow draft, the premium of 10
There were other very fine stallions introduced, viz:

- A chestnut horse of the Tom breed, owned by —
Bay horse, — years old, owned by Mr. Zollickoffer; both horses of fine action and well adapted to produce stock for the saddle.
A sorrel colt by Tuckahoe, rising 3 years old, owned by Mr. Schwartz, of much beauty, fine figure and action.
A bay colt, — years old, by Exile, owned by —, of handsome form, and well adapted to breed stock for quick draft.
A grey horse of the Canadian breed, owned by Mr. Dorsey, of great strength, good action and well adapted to breed stock for slow draft. Besides others not particularly named.

The committee beg leave to report, with regret, that in the arrangements heretofore made by the Trustees, it appears that no premiums have been offered, nor encouragement offered for the introduction of *full blooded horses and mares*; and it is a well known fact, that for this reason so few of that description of the most highly valuable stock of both sexes have been withheld from public exhibition—and it must be admitted that it is from the thorough or full blooded strain, all our valuable horses of the mixed or crossed breed are produced; and if the strain of full bloods are not kept up, it may be expected the cross breeds will very soon degenerate.

Edward N. Hambleton, Esq., and Charles Sterett Ridgely, Esq., from motives of delicacy on their parts, were each permitted to withdraw from voting, when the animals presented by them were respectively exhibited.

Mr. Thomas Worthington, Mr. George Cooke, Mr. Jacob Hollingsworth, and others, exhibited mares worthy of notice; but from the limited number of premiums at the disposal of the committee, they regret that it is not in their power to award premiums to them.

SAM'L HOLLINGSWORTH,
EDW'D N. HAMBLETON,
CHAS. STERETT RIDGELY,
HENRY HALL,
EDWARD S. WINDER,
THOMAS HOOD.

June 2d, 1826.

ASSES AND MULES.

- For the best jack, \$20
For the best jennet, 10

The Committee to whom was referred the examination of mules and asses, regret that there was but one ass entered for examination, and him they considered unworthy of a premium.

JOHN O'DONNELL,
S. W. SMITH,
GEO. BELTZHOOVER.

June 2d, 1826.

NEAT CATTLE.

The Committee on neat cattle, having examined with much attention, the various animals presented for their inspection, respectfully submit the following report:

For the best bull, over two years old, full blood, Improved Durham short horns—they have awarded no premium, because there was no animal of this description offered.

For the best bull, over two years old, full blood Devon; they have awarded the premium of \$10, to Mr. Henry Thompson, for his fine bull Garrick; universally admitted to be the best Devon bull, which has been seen among us.

For the best bull, over two years old, full blood Alderney; they have awarded no premium, there being no animal of this description presented to their view.

For the best bull, over two years old, of any other breed; they have awarded the premium of \$10, to Mr. J. Yellott, for his large and handsome bull of Teeswater and Holstein breed.

For the best bull, under two years old, of any breed; they have awarded the premium of \$8, to Mr. Henry Thompson, for "Hamlet," a beautiful full blood Devon, out of Flora by Garrick.

For the best milch cow, certificate of her milking, quantity of butter produced, and keep for one week; and of the interval of time elapsed between her calving and the week of trial; the premium of \$15 has been awarded to Mr. Henry Thompson, for "Fanny," a half bred Devon, (out of the celebrated dun cow, and by Mr. Patterson's bull;) this being not only the best cow, but the requisitions of the board having been complied with in no other instance.

For the second and third best, no premiums have been awarded; because there were no accompanying certificates.

For the best heifer, of any breed, the premium of \$10 has been awarded to Mr. Gales, of the District of Columbia, for "Lucy," an uncommonly fine animal, of the Improved Durham short horn breed, 13 months old.

For the second best, they have awarded the premium of \$5 to Mr. Henry Thompson, for his full bred Devon heifer "Sally," 20 months old.

Your committee deeply regret the entire deficiency of the exhibition, with regard to oxen; their value, however, is too well known, and duly appreciated by many, to require commendation at this time; and they can but lament, the want of energy in our farmers, in not giving more interest to the show, by the exhibition of some of the fine pairs of oxen which may be found in the neighbourhood. Your committee cannot close this brief report, without expressing their great disappointment at seeing so many pens vacant: but at the same time, they would do injustice to their feelings were they to withhold the expression of their applause, at the spirited exertions of Mr. Thompson for introducing and diffusing among us his justly admired Devons: the number and fine condition of them constituting a large proportion of the show.

This variety of cattle seems to be gaining ground daily in Maryland, because the qualities they have

developed, clearly indicate, that they are well calculated for this district of our country.

N. GOLDSBOROUGH,
WM. GIBSON,
CHRIST. CARNAN,
B. F. MACKALL.

SWINE.

To the Trustees of the Maryland Agricultural Society.

GENTLEMEN—It is with feelings of sincere regret, that, as Judges of swine, they are constrained to announce to you, that no object "worthy of distinction" having been exhibited, they can award no premiums on the occasion.

Very respectfully, your obt. servts,

THO'S B. DORSEY,
SAM'L BROWN,
JOHN STONE.

June 1st, 1826.

SHEEP.

The Committee appointed to examine the sheep, take leave to report the following award of premiums.

- For the best Saxony ram, to Wm. Patterson, Esq. \$10
- For the best pair of Saxony ewes, Do. 8
- For the best merino ram, to Gen. Mason, 10
- For the best pair of merino ewes, to Dr. A. Thomas, 8
- For the best Southdown ram, to the Hon. E. Lloyd, 10
- For the best Southdown ewes, no offer.
- For the best Dishley ram and ewes, no offer.
- For the best ram of any other breed, to Sam'l Stevens, Esq. for his ram of mixed merino and Dishley, 10
- For the best pair of ewes as above, to Sam'l Stevens, Esq. 8
- To the farmer who shall have raised the greatest number of lambs, in proportion to the number of ewes, to John Ensor, of Balt. county, having raised 53 lambs from 39 ewes, 10
- There was no offer for the premium for the largest quantity of wool, except one, which was deemed of insufficient quantity, to entitle it to premium.

VOLUNTEER PREMIUM.

To the owner of the ram, which being shorn upon the ground, shall produce the greatest quantity of pick lock wool, &c. The committee award the premium to Wm. R. Dickinson, Esq. of Ohio, his ram having yielded the greatest quantity of pick lock wool. The committee with difficulty made up this award, the wool from Mr. Patterson's Saxon ram being adjudged a shade finer, but the quantity not equalling that shorn from Mr. Dickinson's, the committee consider his fleece the most valuable, and have awarded as above. The committee with pleasure remark, that Gen. Mason's ram furnished a beautiful fleece, and was a fine specimen of merino sheep.

For the best specimen of pick lock wool, to Richard Ensor.

The domestic industry of the Maryland Agricultural Society, have great satisfaction in reporting, that the various specimens of skill and industry, exhibited on the present occasion, do credit to the families that produced them. The committee, and strongly recommend them to the public.

The committee have awarded the premiums of the society as follows:

- To Mrs. Catherine Knight, of Balt. county, for the best piece of carpeting \$8
- To Miss Eliza T. Gist, of Talbot county, for the best hearth rug, 4
- To Miss Eleanor Anne Bowdle, of Talbot county, for the second best hearth rug, 3
- To Mrs. Stockett, (lady of Dr. Stockett of Elkridge) Anne-Arundel county, for the best counterpane, 4
- To Miss Amelia Dorsey, of Dorchester county, for the best pair of knit woollen hose, 2
- To Miss Maria Anne Priestley, of Balt. county, for the second best pair of knit woollen hose, 1
- To Mrs. Anne A. Durning, of Kent county, for the best pair of knit cotton hose, 2
- To Miss Marietta Thomas, of Anne Arundel county, for the best pair of knit thread hose, 2
- And they have used the discretionary power, vested in them, to award,
- To Miss Keturah Dorsey, of Dorchester county, for a pair of knit angola-half hose—the same premium as offered for a pair of second best cotton hose, \$1
- To Mrs. Anne Stone, of Balt. county, for several pieces of bobinet-lace, wrought in her family; the same premium as offered for the best imitation of Leghorn hats. 4

Whatever doubts may exist, or however politicians may differ, as to the balance of benefits or mischiefs, that may grow out of the encouragement of manufacturing establishments, by legislative protection; it is presumed, that none will question the good that must result from these domestic supplies: none will undertake to charge these, with false economy, or with injurious effects to any part of the community—Here is, strictly speaking, a home-preparation, of a home-production, for home-consumption—Here is, employment judiciously distributed by her "who looketh to the ways of her household, and eateth not the bread of idleness" to every age and sex, regularly, or between whiles, in rainy days and winter evenings, as opportunity may permit; returning much clear gain, in the intrinsic value of the article, besides the comfort, and the proud satisfaction, derived from the use of fabrics of one's own creation—and when we know, as the committee have before intimated, the presiding spirit, from which these have chiefly emanated—who will not, from the good book be ready to exclaim, "as the sun when it ariseth in the high heaven, so is the beauty of a good wife, in the ordering of her house."

The committee had offered to their view, several articles of great merit, of home manufacture, to which, not being strictly of family product, they did not feel themselves at liberty to award premiums; of these they beg leave to mention particularly, and in terms of high commendation, several pieces of various patterns of Venetian carpeting, manufactured by Mr. John Wilson, of the city of Baltimore, remarkable for their excellence in texture, figure, and colouring.

They also saw with great interest, a display, by Mr. John Adolph Blanc, of Piedmont in Italy, of a parcel of silk worms (raised by him, from eggs imported from Italy) feeding on the mulberry, and promising a profitable result—in the opinion of the committee, highly creditable to the industry of the country.

The committee, and strongly recommend them to the public.

IMPLEMENTS OF HUSBANDRY.

The committee on implements of husbandry, beg leave most respectfully to report, that they have carefully examined the specimens exhibited to the society, among which they observed many good ploughs, but as these will more properly fall under the notice of another committee, they will merely observe, that the workmanship of these important implements, was substantial and perfect to a degree highly creditable to the manufacturers, Sinclair and Moore, and Jon. S. Eastman.

The attention of your committee was particularly drawn to the model of an improvement upon the common winnowing machine, designed to facilitate the first and most troublesome part of that operation, by a self feeding movement of simple construction, being a revolving endless band horizontally placed, armed with two vertical bars, and forming the bottom of the hopper, during this part of the process. If the design of the inventor, Thomas Grant, shall succeed, as it probably will, the improvement must prove very useful in dressing grain at the most laborious stage of that business. This improvement will be attached by Sinclair and Moore, when required, to fans of their usual construction, which are very perfect, especially in the iron crank movement which slakes the riddles and screen. Another winnowing machine was submitted to our examination by the inventor, Enoch Walker, of Pennsylvania, and the manufacturer Jona. S. Eastman, of Baltimore—the peculiarities of this machine consist in the valve that forms the bottom of the hopper, and which being agitated by cogs placed on a horizontal roller, assists the operator in feeding the riddles—these and the screen are supported on a perpendicular spindle, and receive their motion from cogs placed on said roller that work against the upright cheeks which connect the riddles and screen at their sides. This fan is simple and of low price, and although much smaller than usual, is nevertheless said to be very efficient.

To your committee many cultivators were exhibited, and two of them for the premium. Among the best we noticed the tried and approved corn harrow, with five Shoe-horn tines, of wrought iron and steel, an excellent implements manufactured by Sinclair and Moore, who claimed a premium for a self-sharpening triangular footed harrow, the tines of which are wrought iron, ending with cast iron, three angled feet, two angles of which cut as shares, whilst the third acts as a coulter, until this becomes dull, when the foot should be revolved on its screw far enough for this angle to be made to act as one of the shares, whilst another acts as a coulter. Finally, when these feet have been worn off, new feet are to be attached, and these are supplied as duplicates with the harrow. The angles of these feet meet in a point, so that they penetrate with the ease of a keen wedge. Mr. Virtue, who manages the farm of Robert Oliver, in Anne Arundel, has informed us that he has used one of these self sharpening harrows, and found it to be twice as operative as Beatson's cultivator, when worked with half the horse power, and that he has applied to the manufacturers for three more of these valuable harrows. We are also credibly informed, that they have been for some time used and approved by many intelligent Pennsylvania farmers.

A cultivator with five tines terminated with cast iron, circular plates of beveled edge, was exhibited for premium by the inventor and maker, Jon. S. Eastman—these plates are screwed to the tines and may be revolved so as to present fresh portions of their circumference as the parts used become dull.

A third furrow seeding plough of improved construction, was offered for premium by Sinclair and Moore;—it is an excellent implement, calculated to

and being of easy draft, it saves two thirds of the labour and time required by the single furrow seed plough.

Your committee noticed on the ground, Eastman's well known and approved Cylindrical Straw Cutter, Brown's Vertical Wool Spinner, which enables one person to spin five times as much as can be done with the common wheel; likewise a corn sheller, being a revolving cone of wood studded with iron teeth, very inferior to and operating on the principle of Phinney's well known and excellent cast iron corn sheller, which has left us only to desire a self feeding improvement thereon to perfect this work of husbandry.

Your committee have doubted whether either of the implements of husbandry submitted to their notice could be considered *new*, and as such so especially deserving of the patronage of the society as to justify the grant of a premium; but fearing to damp the zeal of ingenious artisans, they feel it to be their duty to bestow the bounty of the society upon the implement which to them has appeared to be the most useful and new, and therefore they award the premium of \$10 for Beache's self sharpening harrow, made and exhibited by Sinclair and Moore.

But the invention of greatest importance that came under our observation is the safety carriage, exhibited by its author, a gentleman of Anne-Arundel county, near Ellicott's mills. This not being an implement of husbandry, it was not within our power otherwise to manifest our opinion of the design, than by expressing our decided approbation of this invention;—by it carriages of quick draft are placed completely under the control of the driver, who, without quitting his box, may at his pleasure, instantly lock both hind wheels, and if necessary also detach the pole, splinter, bar, and swing trees, so as to release all with the horses, leaving the carriage at rest even on a declivity. Public stages and private carriages may be made safe conveyances by this improvement, which gives an assurance that has long been desired against risks, which have destroyed many valuable lives, and put more into great jeopardy.

J. W. McCULLOH,
JAMES TILGHMAN,
TENCH TILGHMAN.

June 2, 1826.

FERMENTED LIQUORS.

The committee report, that the domestic wines offered for premium, were various, and (although none of the grape,) the quality such as to render discrimination difficult—three bottles of Gooseberry Wine were very superior, and occasioned some deliberation with the committee in making their award; they, however, concluded on bestowing the premium to Miss Elizabeth Dorsey, for the best specimen of Currant Wine.

(Signed,) JOS. GALES, Chairman.

June 26, 1826.

BUTTER.

The committee on the examination of Butter and Cheese, report, that they award the premium for the best fresh butter to Mr. Job Smith, and for the best preserved butter, three months old, to Mr. E. Clapp.

The fresh butter, to which the premium has been awarded, possesses a richness which is unrivalled, and although there were many specimens of fine butter, and some of them better made than that which has gained the premium, yet they all fall short of the richness which it possesses.

Your committee believe, that this peculiarity of richness, is mainly owing to an intermixture of imported dairy blood, with common stock, and they are supported in this opinion by information from Mr. Smith, who says that his stock is a mixture of

Alderney blood, imported by James Creighton & Co. This fact which establishes the advantages resulting from breeding from imported blood, of known qualities, merits the attention of the public, and which they ought to be informed of.

The committee in awarding to Mr. Clapp a premium for his preserved butter of three months old, were unanimously of opinion, that the butter has no peculiar claim to merit, but was without competition, and the fresh butter he offered was of so fine a quality, that they regretted they had no premium to award to him for it.

R. CATON,
C. R. CARROLL,
JAS. CHESTON, JR.
ROBT. SINCLAIR,
HENRY THOMPSON.

June 1, 1826.

PLOUGHING.

The committee appointed on ploughing, beg leave to report, that they award to J. S. Eastman, for the best ploughing by three horses, the premium of 10. The committee notwithstanding they have awarded the premium to Mr. Eastman's plough, beg leave to report, that they were much pleased with the performance of Mr. Swan's plough, made by Robert Sinclair.

The committee further report, that they award to J. S. Eastman for the best two horse ploughing, the premium of \$10, and to the successful ploughmen in each case \$2.

TH. HOOD,
JOHN KELSO,
JAMES TILGHMAN,
JOHN MARSH,
ENOCH CLAPP.

June 2, 1826.

The Committee appointed to count the ballots, beg leave to report, that the following gentlemen have been duly elected officers of the Society for the ensuing year:

GEORGE HOWARD, of Waverly, *President*.
JAMES HOWARD, *Secretary*.
JOHN S. SKINNER, *Corresponding Secretary*.
JAMES COX, *Treasurer*.
Charles Ridgely, of Hampton,
Jacob Hollingsworth,
George Cooke,
Allen Thomas,
Nicholas M. Bosley,
B. W. Hall,
James Carroll, Jr.
John B. Morris,
Richard Caton
Samuel W. Smith,
David Williamson, Jr.
H. V. Somerville,
James Swan,

Trustees.

JAMES CARROLL, JR.
GEO. COOKE,
JAMES HOWARD.

June 1st, 1826.

PROSPECT OF CROPS.

Extract from a Letter to the Editor. dated
Rose Mount 31st May, 1826.

DEAR SIR,—“The last spring we suffered severely in our wheat crops in this neighbourhood with the Hessian fly, and during the summer more so with the moth and weevil—we sowed our wheat late, with seed very much weevil eaten, and perhaps the prospect the first of January last, was never worse. The mild winter however improved it, and the crop probably never promised to be better, than at this time: my crop of 155 bushels sowing, and it is not better than many others, will, I expect, average 20 a 25 bushels to the acre, unless it should be injured materially by a species of caterpillar,

which has beset it within a few days, and which in a few hours strips it of its leaves and beard, and sometimes, though not often, cuts the head off—about eighteen years past, we had a similar visitation, though confined at that time to one field only. They are seen in detached places through the field, and in one field I have observed them to extend over a space of ten acres together—I send you a sample of the worm and the wheat eaten by them. The wheat is the red chaff bearded, and which I prefer as a tobacco maker, having sowed the same seed 18 years in succession.

Our tobacco crop must fail for the want of plants.
Yours &c. JOS. KENT.”

HORTICULTURE.

FROM THE NEW ENGLAND FARMER.

DURABILITY OF FRUITS.

Having long since been satisfied of the correctness of Mr. Knight's theory, to account, philosophically, for *ascertained facts*, respecting the Apple and Pear,—I have occasionally, as a caution to farmers, advised them to avoid wasting their time and labour in attempting to continue, by grafting and budding, any varieties of those fruits which, in the expressive language of some of them, *were run out*; or according to Mr. Knight, where the trees, though still alive, *had become decrepit with age*. When, therefore, I saw the contrary doctrine advanced, in a piece introduced into your paper from the Essex Register, and confidently urged, *with an imposing display of much reading on the subject*, I thought it was proper, and even a duty, to present to your readers some facts and observations, in support of Mr. Knight's theory,—a theory of which mistaken ideas had been entertained; and of which, therefore, I gave some account. I then hoped I should not have occasion again to take up my pen on the subject. But the same writer has recurred to it; and with increased confidence attempted to overthrow Mr. Knight's theory. That this theory may be better understood, I will enter into some details; the rather, because the Essex Register writer by his partial notices, misrepresents Mr. Knight's doctrine.

Subsequently to my former communication, I received from a friend, information concerning Mr. Knight; which, with what is derived from other sources, will enable your readers more justly to estimate the value of his statements and opinions.

At nine years of age, he had a decided taste for Horticulture; and at that early period of life, he had become an engrafter and inoculator of fruit trees. Nothing has occurred, during a long life, to impair his ability, or his opportunities of cultivating his favourite pursuit. He is now nearly eighty years of age; and possessing a large landed estate, has enjoyed the means, favourable to an enlightened mind, of prosecuting his philosophical inquiries and experiments. These have been numerous. His communications of many of them were published in the philosophical transactions of the Royal Society. Loudon, in his Encyclopedia of Gardening, (a book I have just borrowed) gives the titles of upwards of a hundred publications of Mr. Knight's, relating to the vegetable kingdom. And that celebrated chemist and philosopher, Sir Humphrey Davy, now President of the Royal Society of London,—intending to “connect together, into a general view, the observations of the most enlightened philosophers who have studied the physiology (or nature) of vegetation,” says of Mr. Knight that “He is the latest inquirer into these interesting subjects, and his labours have tended most to illustrate this part of the economy of nature.”*

*Elements of Agricultural Chemistry, p. 9.

* At the same time I desired him to correct several things to his own opinion which he

ascribes to Mr. Bucknal,* and cites the Domestic Encyclopedia, edited by Dr. Mease, in Philadelphia, as the source of his information; and it is of Bucknal's observations on the doctrine in question, of which Dr. Thacher professes to give an "abstract," commencing at page 23 of his Orchardist. It is not Mr. Knight's statement of his own theory; and of course he is not responsible for any erroneous notions or absurdities which the abstract exhibits. Such, for instance, as this—that if any single variety of apple be multiplied in millions of trees, yet, on the death of the parent tree, merely from old age, each individual will decline, in *what-aver country they may be, or however endowed with youth and health*. And Dr. Thacher's illustration of this doctrine (p. 27, 28,) is alike unfortunate.—He says,—“Let it be supposed that the Baldwin apple is a new variety produced from the seed.—This, as the original stock, may continue to live one hundred years. A scion taken from it when ten years old, may live ninety years; another, taken ten years after, may enjoy a duration of eighty years; and so on progressively. At the expiration of one hundred years, the original stock and all derivatives from it, will become extinct.”—Now trees, like men and other animals, may, from various causes, live to different ages before they become decrepit, and die; although none live for ever.

The Essex Register-writer seizes on these palpable errors of the commentators, to throw ridicule on Mr. Knight's theory. But, in his imaginary triumph, falls into an error as gross as any he attempts to expose. Referring to Dr. Thacher's illustration, the writer says: “it is precisely the same as to say, of a family consisting of a grandmother, children, grand children, and great grand children, that all their lives depend upon that of the grand mother; and that when her term of life was completed, all her progeny would die at the same time.” But there is no analogy in the two cases. Children are not, like the engrafted limbs of trees, merely *extensions of the substance* of the bones and flesh, of their parents; but bear relation to them similar to the seeds of an apple, or other fruit, to the tree producing them. These seeds are produced by a sexual union in vegetation, as the young of animals are produced by a like union of the male and female. In most fruits, as in the apple and pear, the two sexes are component parts of the same flowers. But in some trees, as the *date*, and in some plants, as the *hemp*, the males are exclusively on one, and the females on the other; and unless they grow near together, or intermix, there will be no fruit in one, nor seed in the other. The young of animals and the seeds of fruit trees are *new stocks*, capable of producing new progenies, generation after generation, to the end of time. And such is the wisdom manifested in the creation, that although some plants are endowed with the power of propagation by slips, cuttings or scions; yet, as if to insure their renewal, and in their pristine vigour, they bear seeds also, capable of producing new stocks, as a new creation. If, however, in regard to such as yield fruit to man, care be not taken to obtain new and vigorous progenies from *youthful and vigorous trees*—degenerate and unhealthy kinds may be pro-

never expressed nor entertained. These are in pages 16, 17, 21, 45, of his first edition, where my name is introduced. He answered me, that he would make the correction.

*Thomas S. D. Bucknal member of Parliament, wrote about thirty years ago, a pamphlet called the Orchardist; for which he obtained from the London Society of Arts, an honorary medal. A copy coming to my hands, I committed it to Mr. Bordley, Vice President of the Philadelphia Society of Agriculture, who was then preparing the second edition of his “Notes on Husbandry;” into which he introduced some brief sketches of Mr. Bucknal's method of “close pruning and medicating fruit trees.”

duced. This is exemplified in the human race; among whom peculiar debilities and diseases of parents become the unfortunate inheritances of their children. In like manner, Mr. Knight, having selected the seeds of apples of some of the best kinds of the old fruits, with an intention to propagate new ones, “soon found that *many* of the young plants (particularly those from the Golden Pippin,) were nearly as much diseased as the trees which produced them.” He adds—“I several times raised three or four plants from seeds taken from one apple, and when this had been produced by a diseased tree, I have had not only as many distinct varieties as there were seeds, but *some* were much diseased, and others apparently healthy; though the seeds were sown in the same soil, and the plants afterwards grew within two feet of each other in the nursery. Grafts inserted from each, retained the habits of the tree from which they were taken.”

On this passage of Mr. Knight, in his treatise on the apple and pear, the Essex Register-writer remarks—“Thus it seems, that whether we propagate from grafts, or the seed of old and decaying varieties, no new life is produced, but only the continuation of the life of the old parent stock:” and then *very sagaciously* adds: “If this be true, all our varieties of the apple and pear trees should long since have become extinct.” Why so? if the indolence or carelessness of *man*, had prevented his raising new stocks from the seeds of *young and healthy* trees; or if, in all generations, he purposely waited till the trees had grown old and decrepid, before he attempted to raise new stocks from their seeds (and this absurdity is implied in the remark of the Essex Register-writer;) Nature, always provident, would have supplied his deficiencies. Ripe fruit, from young and vigorous trees, dropping on the ground and rotting, its seeds would there have germinated, and produced the desired new and healthy stocks.

T. PICKERING.

(To be continued.)

MISCELLANEOUS.

An Eagle of the largest class was shot a few days since, at Waterbury, Connecticut. It measured, when its wings were expanded, *seven and a half feet*, from tip to tip.

GREAT FISHING.

Brooklyn, June 1.

On Monday the 9th ult. a fishing company at Riverhead, L. I. commanded by Capt. Noah Youngs, drew on shore in a seine 1,500,000 fish of the kind called moss bunkers, or bony fish, which are used for manure. The Riverhead Bay, which is about three miles across, has yielded about nine millions of this fish, which have been taken by eighty men, and are valued for manure at one dollar per thousand—thus amounting to the handsome sum of 9000 dollars.

At Southold, a few miles from Riverhead, the fishing companies have been equally successful and vast quantities are on the beach.

These fish when applied to the land, render the poorest soil productive. It is stated that 10,000 will make the worst land produce twenty bushels of wheat per acre.

GREAT HAUL.

Fifteen hundred and forty Shad were taken at a single draft on Monday last, at the Jefferson fishing place in Chatham, opposite Middletown, on the Connecticut river.

A LARGE BEAR.

A bear was surrounded and taken in Brandon, Vermont, on the 21st of May, weighing 428 pounds, which is said to be the largest ever taken in that state. Bruin had been rather mischievous among the neighbouring sheep, and killed fifteen or twenty

of them, when the inhabitants in the vicinity became a little exasperated, mustered about 100 men, and surrounded and took him.

[From the Wellsborough Pioneer.]

MAPLE SUGAR.

Messrs. Editors—There was this season extracted and manufactured from the Forest Tree, 36,000 lbs. of this useful and wholesome article, besides 1700 gallons of molasses; in a new but flourishing settlement in Liberty township, Tioga county, Pa. comprising in the whole about ninety families, and occupying a little circle of not more than five miles in extent. The average price of sugar is 8 cents per pound; and of molasses 50 cents per gallon—thus bringing into circulation in this little district, 3,730 dollars, and done in the space of about six weeks. Those who read this, will judge of the importance of this article.

JOHN COCHRAN.

Liberty township, May 16, 1826.

POETRY.

AFFECTION—HER SMILE AND HER TEAR.

O what is so beautiful, half to behold,
As the smile which affection bestows;
It is sweeter than incense, and brighter than gold,
And as soft as the breath of a rose.

O, it sheds round the heart, in the happiest hour,
A halo of rapture and love?
And divinely it glows 'neath the magical power
As a gem 'neath the light from above!

If so witching her smile, O what must be her tear?
Deep, deep in her heart doth it flow!
It is doubly sacred, and doubly is dear,
Being shed in the hour of her wo.

Both, both are most exquisite! blest is the smile
Which beams in the season of gladness;
And blest is the tear which can sorrow beguile,
Or soften one moment of sadness.

SPORTING OLIO.



SALE OF BLOODED HORSES IN NEW-YORK,

Belonging to the estate of the late Gen'l Coles.—23d May, 1826.

Dove, with a fine colt by Rattler at her side, Dove 10 years old—mare and colt sold for \$500.

A filly out of Romp by Bussora, 2 years old—price \$300—now at West-Chester with the horse Henry.

Young Romp, with a colt by Rattler 2 weeks old, sold for \$1200, to Walter Livingston.

Sports-Mistress, with foal by Rattler, sold for \$1200.

A-Bussora colt, 3 years old, out of Dove, sold to Mr. J. Verplanck, for \$700.

A bay Bussora colt, out of Sports-Mistress, 3 years old, for sale \$600—said colt run with success against a colt of Mr. Stevens, one mile—22 d inst.

Agnes sold with a colt from Eclipse by her side, to Thos. Pearsall, for \$600.

[The above account rendered by J. K. Milnor Esq., and may be depended on.]

[* This we suppose should be three years old.]

THE FARMER.

BALTIMORE, FRIDAY, JUNE 9, 1826.

The next meeting of the Trustees of the Maryland Agricultural Society, will be held at Dalton, the residence of Doctor A. Thomas, on Thursday, the 22d inst. A full meeting is expected, without further notice.

[THE LATE CATTLE SHOW.—We were prevented, by indispensable engagements, from dining on the ground the last day of the Exhibition. From a friend who had that pleasure, we have received the following sketch:]

The business of the first day being closed, the company met to dine, and nominated Gen. Mason, of the District, (a member of the Society,) to fill the chair for the day, in the absence of Gen. Ridgely, the President of the society, who did not attend, from the delicate state of his health.

After dinner, the President-elect for the day, recommended an attention to domestic economy; and embodied his advice in the following toast, which was drunk with general approbation:

"Domestic Economy—It makes the happiness of families, and the prosperity of nations."

The following volunteer toast was, by permission, offered by Mr. George Howard:

"The Constitution of the United States,—at sea, or on shore."

Captain Morris, a guest, was sitting at the right of the President.

A letter having been received by the Trustees, announcing Gen. Ridgely's resignation of the office of President, a committee was appointed to report thereon, which report was made, read, and accepted, and ordered by the Society to be printed, with the General's letter, communicating his resignation. General Mason was again called to the chair for the day, and Com. Morris again honoured the Society with his company. After the dinner was withdrawn, the health of the President for the day was given, and drunk with great zeal—a zeal that arose from a sense of good feeling, manifested by him through all the stages of the society to its present importance.

In reply to the call "of drinking his health," Gen. Mason arose, and said in expressive language, "that he was proud of the honour conferred on him; and observed that he had hailed the establishment of the society, in its infancy, as destined to do much good; that he had from its beginning been a member, and although but a personably active one, he was always alive to its objects, its endeavours, and its success; that much had certainly been done; that a feeling, an interest, a competition had been elicited, and good results had grown out of the institution. But," he observed, "although much had been done, yet much remained to be done; and to do this, every individual ought to put his shoulder to the wheel; the public called for it—they looked with expectation, anxious expectation, for great results, and he hoped they would not be disappointed. It was not only the interest of the Society that was included, the interest of the State, and indeed of the United States, were more or less connected with the Agricultural Society of Maryland, and with other similar societies." "May I," Gen. Mason observed, "be permitted to remark, and I do it with reluctance and with great regret, that the exhibitions this day in horned cattle, and some other species of stock, have not been what they were—t I, and what the public expected of you, know as I do, that you have the means of displaying the best stock, in all the various improvements has given rise to."

sessing. Why then, gentlemen, let me ask you, do you withhold an exhibition of them? Why let the character of your institution fall off?—a lack of zeal in its members. Perhaps the season is too hot—perhaps the period of your meeting is not found to be convenient for exhibiting stock." "I would" said Gen. Mason, "gladly frame any excuse for you, rather than it should be supposed you were flagging in your zeal, or that the last fruits of the Society should be lost to the public: for with the advances you have made with your weekly journal of the 'American Farmer,' you can do much, and much is expected of you. Then let me again call on you, and urge you, not to be supine in the cause; use your best efforts, the unanimous efforts of one and all, to unite in giving support and permanence to your institution, and success will be certain. With these remarks," Gen. Mason observed, "he he would beg leave to give a toast:

"The excellent results produced by the noble emulation excited by the agricultural societies of our country."

The committee for counting the votes for the officers of the day, having retired to discharge their duty, the health of the next president was drunk—The chair then consecutively gave the following toasts, offered by the company.

By Mr. Potts—An increased intercourse, between "the Agricultural Society of Frederick," and "the Maryland Agricultural Society"

By ——"The memory of Gen. Harper."

By Mr. Jacob Hollingsworth—"The Ex-President Gen. Ridgely."

By Mr. Howard—"The American navy, our last defence."

Commodore Morris being present, he arose, and remarked, "that being the only officer of the navy present, he felt a task imposed on him, to acknowledge on behalf of his brother officers and himself, the compliment paid to them, and to their profession: that the good opinion of the country, was certainly a grateful reward, to any exertions they might make to merit approbation; and he hoped that the future exertions of the navy like those of the past, will continue to receive the applause of his country." He then asked leave, to give the following toast:

"The Agricultural Society of Maryland—May its success be equal to the wishes of its members."

Dr. Thomas, then gave the health of Capt. Morris, which was drunk with much pleasure.

The committee, to whom was referred the counting of the votes for officers for the ensuing year, returned with a list of the persons elected; Geo. Howard, Esq., of Waverly, was chosen President, and his health as "President Elect" was drunk.

By Mr. Caton—"The officers of the navy, and the army of the United States, equally distinguished as citizens, as in command."

By Mr. Potts of Frederick—"Captain Elliott."

By Mr. Jacob Hollingsworth—"Capt. D. Murray, late of the navy."

By Mr. Morris—"The memory of the gallant Capt. Tripp."

By Mr. Jacob Hollingsworth—"The memory of Commodore Decatur, the pride of his country."

By the Chair, and on rising—"All the pretty girls of Christendom."

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	7 50	8		
BACON, and Hams, . .	lb.	5	8	9	12
BEEF-WAX, Am. yellow	—	33			50
COFFEE, Java,	—	17		22	25
Havana,	—	17			20
COTTON, Louisiana, &c.	—	13	14		
Georgia Upland, . .	—	10	12½		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	12			14
CHEESE,	—	8	10	12	15
FEATHERS, Live, . .	—	30	33	37	
FISH, Herrings, Sus.	bbl.	2 25			
Shad, trimmed, . .	—	7 00			
FLAXSEED, Rough, . .	oush	75		87½	
FLOUR, Superfine, city,	bbl.	4 25		5 00	
Fine,	—	4 00	4 50		
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	67	70		
Wheat, Family Flour,	—	85	90	95	
do. Lawler,	—	50	82		
do. Red,	—	83	90		sales
Rye,	—	68			
Barley,	—	80			
Clover Seed, Red . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed, . . .	—	2 25		3 00	
Oats,	—	55	56		
Beans, White, . . .	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	15		25	
HOGS' LARD,	—	7	8	12	
LEAD, Pig	lb.	6½			
Bar	—	8	8½		
LEATHER, Soal, best,	—	23	24	62	
MOLASSES, sugar-house	gal.	45		62½	75
Havana, 1st qual. . .	—	27½	28	37½	
NAILS, 6a20d.	lb.	64		9	
NAVAL STORES, Tar, .	bbl.	1 25	1 38		
Pitch,	—	2 25			
Turpentine, Soft, . .	—	1 50			
OIL, Whale, common, .	gal.	31	33	40	
Spermaceti, winter .	—	80		88	
PORK, Baltimore Mess,	bbl	11 00	12 00		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	4 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3		5	
SOAP, Baltimore White,	lb.	12	14	18	
Brown and yellow, .	—	5½	7½	8	
WHISKEY, 1st proof, .	gal.	29	30	38	
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	36		50	
SUGARS, Havana White,	c. lb.	13	13 50	15	16
do. Brown,	—	9 00	9 50		
Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	
SPICES, Cloves, . . .	—	75		1 00	
Ginger, Ground, . .	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes, . . .	bush	43	45		
Liverpool Blown . .	—	45		75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 20		2 00	
Lisbon,	—	1 15		1 50	1
Claret,	doz.	4		5 00	9
Port, first quality, .	gal.	1 65		2 50	
WOOL, Merino, full b'd	lb.	35			
do. crossed, . . .	—	25			unwash
Common, Country, .	—	20			but fir
Skinners' or Pulled, .	—	21			

Printed every Friday, at the office of JOHN D. KINER, Editor, by JOHN D. TOR, corner of St. and Market streets, where every description of Printing is handsomely executed.

- AGRICULTURE.

TURNIPS.

On the comparative merits of various esculent roots—on the seasons for sowing them—on prejudices as to the influence of the moon upon vegetation—on an ingenious contrivance for depositing seeds in drills—on deep ploughing, and the advantage of stirring the soil between growing crops—on the extraordinary success and skill displayed by Mr. Walker, in the management of his farm near Holmesburgh.

Philadelphia county, 1826.

JNO. HARE POWELL, Esq.

Corresp. Secretary of the Pennsylv. Agricult. Society.

SIR,—From the remarks I made in a late communication to the society relative to the cultivation, use, &c. of the common turnip; some may suppose I intended to depreciate the value of the ruta бага, or Swedish turnip, not so; for most purposes I believe it to be far superior to the other—it will keep better, and in the spring when succulent food is most wanted by the farmer for his stock, it will be found much sweeter, and as solid as when taken from the ground—it also answers for table use when the other kind has become spongy, bitter and unpalatable—I consider the ruta бага, however, for feeding purposes vastly inferior to the carrot and mangel wurzel, and therefore cannot subscribe to the high encomiums that have been so lavishly bestowed upon them—For the dairy they are less eligible than the white turnips, and they cannot be given to cows, in sufficient quantities to produce great increase of milk, without imparting a feculent smell and taste to the cream and butter. The leaves which are large and exuberant, are totally inadmissible for the dairy, as they are infinitely stronger and produce a more unpleasant odour than the bulb: but for dry cattle, sheep and swine, they afford an abundance of food. To bring them to perfection, you must cultivate them carefully upon the drill system, and whether they ever arrive to that condition or not, will depend in a great measure on the state of the weather. They require moisture, rich ground, and faithful tillage. Sown broad cast they will not come to any size, unless in a very fertile soil, with frequent hand hoings, which would be attended with more trouble and expense than in any other way. To those only, who dare deviate from the course of their forefathers, and have courage to follow the drill system, regardless of “the world’s dread laugh,” I would recommend the cultivation of them, for those who succeed will find themselves amply compensated for their labour. They have the same enemies to contend with in common with the white turnip, and they require to be sown rather earlier, though the finest I ever raised, were sown in the wet season of 1824, as late as the 24th July; so that in one respect they have the advantage of the carrots and mangel wurzel, inasmuch as that they may be sown after harvest, and after other crops. I sowed some last year between my carrots, but owing to the excessive drought, few of them vegetated; and those that did were small, though of good quality. Those I have mentioned as having raised in 1824, between the carrots, Mr. George Walker, who resides near Holmesburgh, and who came from the great turnip county of Norfolk and from the vicinity of Holkham, assured, me that to take them all in all, they were the largest and finest he had ever seen in England, Scotland, or elsewhere. Mr. Walker practises the drill system, and has been himself successful in cultivating the ruta бага. This gentleman is an enlightened agriculturist, by profession, and I am persuaded I hazard nothing in saying, that he has done as much, or more, in improving a poor worn out soil, with the aid of less manure, than any other man in the country. This may appear a bold assertion, but in

support of my opinion, I appeal to the many intelligent farmers and gentlemen by whom he is surrounded, who knew what his farm was when he purchased it, about 4 years since, and who know what it is now. It exhibits a pleasing spectacle of what may be done by industry, skill and economy, and confirms me in the sentiments I have always entertained, that deep and repeated ploughings, in proper seasons, (notwithstanding all that has been said about the difference of climate,) are the fundamental principles of good farming, here as well as in England. There they plough deep in order to get rid of moisture; and here we should plough deep in order to retain it. This, by many, will be considered a paradox, but it is nevertheless true. I am not philosopher enough to account for all the causes in the latter instance, but I have had sufficient practice to convince me of their good effects. Mr. Walker ploughs from 10 to 12 inches deep, and by a judicious rotation of crops, he last year raised from 35 to 40 bushels of wheat to the acre, weighing from 63 to 64 pounds per bushel: whilst some of his neighbours, on much richer ground, did not get more than half the quantity. The last summer, the latest and driest I ever experienced, I had about an acre of carrots, and about the same of mangel wurzel, next to each other in the same field; they grew on a declivity to a southern exposure. They were sown and planted near a public road, and attracted the attention of all who passed by—to some they were objects of curiosity, to others of admiration, and to many of ridicule—so intense was the heat and so great the drought, that I almost despaired of getting any thing like half the crop I had anticipated: having, however, experienced the efficiency of ploughing often in dry weather, between growing plants, I determined my hoe-plough should not be idle. After the mangel wurzel arrived at a certain height, I could not pass the plough between them, by reason of their irregular manner of growing; amongst the carrots, whose roots do not extend above the surface, and therefore present no obstacle, I ploughed every fifteen or twenty days in the driest time, and was thus afforded the best opportunity (but such an one as I hope will not for some time to come occur again,) of showing the beneficial consequences resulting therefrom. The soil between the carrots, even where I had cut the tops off within an inch or two of the crown, and thus as it were leaving the ground bare and exposed to the scorching rays of the sun, was always loose and moist; whereas the soil between the mangel wurzel became, in comparison with the other, parched and hard, and the leaves so dry, that you might have reduced them in an instant to the consistence of impalpable powder, by rubbing them between your hands. The carrot tops continued green, beautiful, and luxuriant throughout the whole of this fiery ordeal. The beginning of September, I began cutting them, and hauled in almost every day a hand cart load or two, containing as much as a man and a boy could well pull, for the horses and hogs, until the 11th of November, when I began to harvest them. By this time the roots from whence the tops were taken in September, had thrown out tops again as large and as fine as those first cut, and I hauled in upwards of 24 cart loads, pressed on, each containing as much as a good horse could draw. I could not have had less than 15 tons of roots and tops to the acre; the tops full grown, will average nearly half the weight of the roots; they are equally valuable for feed; no gramnivorous animal will refuse either, and this is saying more than can, I think, with truth, be said of any other esculent. I had not a carrot in the crop that weighed half as much as I have before had them to weigh; it is therefore probable that if the season had been favourable, I should have had double the quantity. I did not perceive that any injury was sustained by the roots

from which the tops were taken. It may be thought presumption in me to advise the adoption of a system, which men of talents, science, and much more experience have recommended and urged over and over again to little purpose—but I cannot help expressing my astonishment at the unwillingness manifested by the great majority of husbandmen, to vary in the smallest degree from the beaten track of their ancestors. In almost every branch of the arts, extraordinary exertions are made, and various experiments tried, with a view to improvement, to fame or to fortune, whilst those engaged in the first and most essential of all, in that which gives life and sustenance, and vigor to the whole, fold their arms with apathetic indifference, and, as if the spirit of emulation had become extinct within them, listlessly pursue the unbroken “tenor of their way.” My ideas on this subject cannot be better exemplified, than by making the following extract from an eloquent address delivered before the Philadelphia Society for promoting Agriculture, at their annual meeting in 1822, by Nicholas Biddle, Esq., who says—

“With all the splendid success of Mr. Coke, of Norfolk, in rendering his land nearly ten times as productive, he used the drill husbandry for sixteen years before any individual followed his example; and even now his improvements are supposed by himself to extend about one mile in a year.”

Now, these facts show at once, that such are the unaccountable and inveterate prejudices of farmers, with few exceptions, comparatively speaking, that though they have “demonstration strong as proofs of holy writ” before their eyes, they obstinately and pertinaciously refuse to profit by the opportunity thus presented to them; and because the method bears the character of novelty, advance as an excuse, for not imitating that which would redound so much to their interest, this sapient, and as they suppose unanswerable argument—that it is *book farming, and therefore will come to nothing*. So that according to this sort of rural logic, in order to become a good practical farmer, it is indispensably necessary that you should not read about these matters; or if you do, nothing at least beyond the pages of an almanack, and then chiefly with the view of consulting the phases of the moon and the signs of the zodiack, and by these to be governed with more than heathen superstition in all the operations of ploughing, planting, sowing, gathering, &c. Some time since, in passing through the Philadelphia market, I observed a woman of German extraction with a basket of prodigious fine parsnips; they measured 24 to 3 feet in length, handsomely tapering from the crown to the end. I asked her, how she managed to raise them so large and fine? for, said I, mine have turned out forked and indifferent this season. May be, said she, you don’t sow them in the right sign. Perhaps not, I replied; I have no faith in such things. Ah, but there is something in it for all, said she, and you must sow in the sign of the fish; (thinks I to myself, this is a fish story.) On my return home, however, I thought I would look at my memorandum book to see how far it was from the fish when I committed the seed to the ground; and it actually appeared that I had accidentally sown on the 22d of May, 1824, which was on the second and last day of pisces, the very time prescribed by the credulous old woman to insure success; I therefore attributed my failure to that which I had before supposed to have been the real causes, a deficiency of tillage and a scarcity of manure. Jethro Tull, who has written an ingenious and one of the best treatises on husbandry extant, thinks it not unlikely that hogs were the first tillers or ploughers of the ground, and that rational men, not willing to be excelled by instinctive brutes, invented an instrument something like a plough, to break and divide the soil for the better reception of seed. Now, if he is right in his conjecture, and we

continue to progress in the improvement of agriculture at the same rate it has advanced from the beginning, it may reasonably be presumed, that in the course of some dozen centuries hence, the drill system may come into pretty general use. But to return once more to the carrots, in the sowing of which I think I have discovered some improvement. You have seen the tubes I had made, with the intention of obviating the necessity of stooping, and of planting with precision and expedition, seed of various kinds. The carrot seed, however, is so different from all others, and so difficult to sow with any degree of accuracy, that it never entered my mind to use them for that purpose, until the last season. On the 30th April, as I have before mentioned, I had the ground prepared in the manner I have stated to you in a former communication, (See vol. 1, Society's Memoirs.) The drills on the ridges were already drawn, but it blew so violent a gale, I found it impossible to keep the greater part of the seed from blowing away as soon as it had escaped from the hand; fearful of a storm, I was anxious to get in the seed immediately on the fresh ground—but how was it to be done? We could make no progress in the usual way. In this dilemma, and at this moment, it occurred to me to try the tubes. It was a happy thought; for in four hours I had the satisfaction to see the whole acre completed by one man and myself, with each a tube. I had put the seed in soak forty-eight hours before, and after draining the water off through a fine sieve, mixed well with it about an equal quantity of plaster of paris. With this mixture we filled our right hand waistcoat pockets, and taking as much between the two fore-fingers and thumb as could be retained without wasting, we dealt it out into the tubes, which were held over the drill as close to the bottom of it as possible, we walking in the furrow; so that we were enabled to get on at a tolerable smart gait, eight or ten paces, without resorting again to the pockets for a fresh supply: and I found afterwards that they came up more regular than any I had ever sown. Blow high, blow low, I shall never use any other method. The tubes are very simple, and cost from 33 to 40 cents. I use them myself for all seeds sown or planted in drill, and even potatoes, which I cut into single eyes. All who have seen the tubes highly approve of them. I have thought proper to annex, for the information of others, a figure and description of them; and remain, sir, very respectfully,

Your most obed't humble serv't,

JAMES WILLIAMS.

LUCERNE.

MR. SKINNER,

In answer to the inquiries of the Editor of the Telegraph, of Chestertown, respecting lucerne, published in your paper on the 12th of May last, I will

* I prefer sowing all long-topped roots on ridges; particularly carrots and parsnips, because they are raised to a deeper tilth, are sown with less seed, and are less liable to be washed than by line; and, in the case of the carrot, the powerful influence of the sun, the ground being so high, and the regular supply of water, is greatly increased.

For seeds, the tube is of the size of a large egg, according to the size of the cutting, being about 2 inches, and 3 feet 6 inches long. The sets in are inserted before the waist; and the hands are enabled to stand erect, and the seed is sown with great precision, and in the form of a funnel, the seed being in the middle of the tube, and the ends being open. The former is the latter is the former.



make some observations on the subject; and I shall be much gratified if I contribute any thing for the benefit of the farmers of Kent county.

I might refer to my observations on the subject, published in your 6th vol. p. 362; but as the farmers of Kent county may not generally have access to the volumes of the American Farmer, I will briefly state what was there said, and I request the Editor of the Chestertown Telegraph will copy this into his paper.

1st Inquiry.—“The time of sowing and the quantity of seed per acre.” I recommend sowing as early in the spring as the weather will permit and the ground is dry enough. Some writers recommend twenty pounds of seed to the acre; but I have found sixteen pounds to be sufficient.

2d Inquiry.—“The preparation of the ground.” The ground must be made clean by a crop of potatoes, or something else, for the lucerne is a weakly plant when it first comes up, and weeds and grass will smother it if the ground has not been well prepared; after a few weeks it forms a strong top root, and then it will not want protection against drought or weeds. A caution may be necessary against being too sparing of seed; for if it comes up thin, there will be danger of its being overpowered by weeds and grass. I find spring barley sown thin, a half bushel to the acre, to answer well; for the barley soon shoots up so as to protect the young plant against the sun, and being thin, does not smother it. The barley, when ripe, may be mowed, but should not be cut high, so as not to take off too much of the lucerne.

Gen. McDonald, in 1824, sowed lucerne with turnips on the 3d of August, after a crop of early potatoes; in 1825 it was very good, and was frequently cut. This year he reported it to be good, though later and lower than usual, owing to the severe frosts about the middle of April.

In the spring of 1824, I sowed two acres with lucerne, 16 pounds to the acre, and one acre with barley, the other with rye. The barley was heavy and fine, and produced full half a crop. The lucerne was mown about the last of August, and by the last of September it was knee high; but I forbade its being cut again, as I wished it to acquire strong roots and be early the next spring. On the 12th of April, 1825, it was 16 inches high, (which you have recorded in No. 4, vol. 7.) and within a week from that time we commenced cutting for soiling. It was cut several times during the summer, notwithstanding the great drought. This spring it was thick and fine, but owing to the severe frosts from the 15th to the 20th of April, we did not commence cutting for soiling till the beginning of May. About the 20th of May, I found that one acre had been cut, and as the rest began to lodge, I ordered it to be cut for hay.

In vol. 5, p. 214 of the Farmer, will be found some observations by a New Jersey Farmer, who says, “I have found by experience this article [lucerne] to be the most profitable of any grass which can be cultivated. It vegetates quicker in the spring than any other grass, it resists the effect of drought—it may be cut four or five times in the course of the season, and it will endure for at least twelve years, without being renewed. Of all other grass it is the most profitable for soiling.”

“The kind of soil is not suitable for its culture, is a dry meadow, or sandy or clay loam will also answer, but it does not wet.”

I shall conclude with a few observations: 1st. The ground must be rich by manure: for every farmer should have a good stock of manure for every farm, and should be careful to keep it for a season from potatoes.

2d. As to seed, I find that a half bushel to the acre is sufficient, and that a half bushel to the acre is sufficient.

could get it for nothing, for it would certainly occasion disappointment. I shall endeavour, this summer, to save seed.

I imported seed two years from Liverpool, which cost me, with duties and charges, forty-nine cents the pound.

It will certainly make good hay; but I have not had experience enough to decide whether it will answer better than clover and other grasses, for that purpose.

I recommend to the farmers of Kent county to begin with one acre, or even a half acre, for soiling, and they will then soon be able to judge for themselves.

J. E. HOWARD.

June 8, 1826.

CLIMATE OF ALABAMA.

Mount Columbo, near Selma, Alabama, }
J. S. SKINNER, Esq., 18th May, 1826. }

Sir,—To show the difference of climate and the advancement of our seasons, I will state a few facts which may be interesting to you.

I had strawberries ripe on the 21st of March, and green peas on the 24th. I harvested my wheat on the 1st and 6th inst. and had green corn, perfectly full, on the 11th.

Many have been apprehensive that good wheat could not be raised often in this part of the state, and that we would have to depend on Tennessee and the other western and middle states for our flour. From the experience of the two last years, and of this, our prospects in this respect are flattering. In this new country, but few persons have had land to spare from the more important staples of the country, for this article, so necessary for domestic comfort. Some few, however, have sowed wheat for two or three years, and good crops have generally been made, and in some instances such as would be considered excellent any where. I planted a few acres last October, for the first time in this state, and harvested it on the days stated. I never had better, and believe I never saw better. It is called the red spring wheat. I now feel confident that wheat of the best quality may be raised very abundantly in Alabama; but having no good mills we cannot have it manufactured into superfine flour. We can have, however, fresh flour and sweat bread, if it be not very fair, provided we can preserve our wheat from the weevil, which is very destructive in this country to every species of corn. If some of your valuable correspondents would furnish us with a preventive to these pests to the farmer, (the blyng and black weevil,) his specific would lighten the labour and cheer the heart of many an honest farmer, “his country's stay,” in peace or war. I have lately been informed that hickory leaves, mixed with the wheat, would prevent the weevil from injuring it. I will try it in a small way, and if the experiment should prove successful, it will be a very important fact in agriculture or rural economy.

The corn which I ate on the 11th inst., is of the eight-rowed, yellow flint corn, cultivated in the northern part of the state of New York and in Canada. I got it two years ago in Saratoga, and was told it was the common corn of that country, and that it was very productive. I planted it last year early in March, and had mutton corn some time in May. This year I planted it in February. Instead of growing larger, in this climate, as I expected, it was last year quite a dwarf, and this year from the production of the last, it is still more diminutive. I think, from appearances, if planted for several years from the same stock, it would cease to produce corn, and would probably make its appearance with a tassel.

If similar experiments were made, and their results noted in different parts of the United States

some important inferences might be drawn by scientific and practical men. I am in lat. 32° 26".

Your obed't serv't,

ANDREW PICKENS.

N. B. The common corn of the country is beginning to tassel, and cotton will soon blossom.

PROSPECT OF CROPS.

SIR, Columbia, S. C., May 29, 1826.

I have nothing of importance to mention relative to our agriculture here. Our crops are suffering by an uncommon and very severe drought, and I hope the cotton crops will be very short this year. My vineyard has suffered very much in March by late frosts; so much so, that a person unacquainted with the resources of our climate, would have supposed that there would not be one single bunch of grapes; but notwithstanding this, the present prospects are very flattering, and if there should be no rot among the grapes this summer, I shall make a very great crop. The only bad effect of the frost was to oblige me to prune the whole of my vineyard, and that all the young vines (many of which would have borne fruit this year,) have been cut down to the ground. There is no plant that stands the heat and drought of our climate better than the vine.

I have, last year, spoiled my wine by following Major Adlum's advice of putting sugar in it; though instead of putting three pounds to the gallon I only put two. I wish I had put only half a pound; and if I could leave my grapes long enough on the vines so as to attain a perfect maturity, I would not put any sugar at all.

I am, very respectfully, dear sir,

Your obed't serv't,

N. HERBEMONT.

Extract from a Letter to the Editor, dated

SIR Savinton, Cecil county, Md., June 10, 1826.

We have not had any rain at this place since the fall of snow on the 10th of April; some partial showers have passed in different neighbourhoods. My overseer yesterday brought to me 5 grains of corn taken from the earth, and which has laid in the ground as replanted corn, full three weeks; and which grain was as sound and in as perfect order for the mill, as the day it was planted. My strawberries have totally failed, not one plate deserving the name. The last of next week some of my wheat will be ready. A letter from Dover, Delaware, gives me equally unfavourable news; yet, strange to tell, my corn, though not high, looks strong, and is of a good colour.

HORTICULTURE.

CAULIFLOWERS.

How to preserve in hot weather, after they are cut.

J. S. SKINNER, ESQ.

June 6, 1826.

Dear Sir,—I send you a couple of cauliflowers; not that their size merits acceptance or are entitled to your attention in any measure or on any account than that they may serve to make you familiar (if not already so,) with the mode we have adopted to preserve this vegetable—and thereby protract the period of its stay. You are aware that they flower simultaneously, or so nearly so that it is either a feast or a famine. To obviate this, when the flowers have matured in greater numbers than can be consumed, cut and suspend them (separate,) in the ice-house. The leaves fade, though the flower does not diminish in worth. You can judge of this fact and appreciate the value of this expedient (taken in connection with such a season as the present,) when you are assured, that the plants I send were cut with thirty or forty others, three weeks ago, and

have been preserved as previously stated. I am, very truly, yours,

JOHN B. MORRIS.

LADIES' DEPARTMENT.

FOOD—MILK.

[It can scarcely be necessary for us to explain how it is that under the head of the "LADIES' DEPARTMENT," we should introduce the subject of milk, its properties, uses, &c.

Our views are much mistaken by those, if there be any, who suppose that in appropriating a certain proportion of this journal to the peculiar instruction and entertainment of our female readers, it was our design to fill that portion with frivolous love-sick poetry, descriptions of fashions in dress, &c. We have a higher and a nobler aim. The Ladies' Department will be dedicated to mothers and thrifty housewives, and those who aspire to the honour of becoming such—to those who are in fact, as well as in name, the *helpmates* of their husbands. Hence, when in a necessarily desultory course of reading we may meet with any thing calculated to impart useful information, or to convey an instructive moral connected with housewifely duties and maternal relations, we mark it for the printer to place it under the "LADIES' DEPARTMENT." In this portion of our editorial duties, we are sensible much assistance might be derived from many of our fair readers; and that assistance has been more than once sincerely and earnestly invoked.

In regard to the subject here introduced, every one will admit that in a general view, scarcely any thing enters so largely into all our alimentary preparations; no article of food is more worthy of being investigated and understood. Such is the extent to which it is used in the economy of house-keeping, that our health as well as pleasure, may be said to depend on a knowledge of its qualities, and the various modifications under which it may be advantageously used. But the light in which it may be regarded as most emphatically connected with this portion of our journal, is its peculiar adaptation to the nourishment of infantile existence. Every mother will feel the truth of this suggestion at once; and our object here is merely to warn the reader, that after the general remarks on milk contained in this number, we shall in a subsequent one, show how the subject is connected with the cares and duties of the mother, and the health of the human offspring.]

NUTRITION—FOOD.

Experience and philosophy unite in confirming the doctrine, that the organic structures of man and of all other beings endowed with life, never cease, whether in health or disease, from parting with certain proportions of the material elements whereof they are composed. During the first stages of its existence moreover, the animal frame continues obtaining progressive augmentations of stature; and, by necessary consequence, requires incessant and commensurate supplies of the organizable essences which are applicable to its growth. From this peculiarity of the vital nature, results an indispensableness of repairing these habitual diminutions, as well as of providing for these ever-returning wants, by the introduction of alimentary substances into the system, for the purpose of being assimilated and adapted to their ultimate ends. These essential requisites are furnished, in a manner as admirable as it is beautiful, by means of the nutritive and its subordinate functions.

Nutrition or alimentation, then constitutes the natural process by which the organic enlargement and strength of animals is promoted;—and this process is perfect or defective in a degree proportioned to the state of the individual's health and of the food's abounding with salutary qualities. Antecedently to its birth and entrance on an independent

mode of existence, the foetal being, obtains all the constituent principles of its forming body from the mother's nourishment and through the interposition of her circulating systems: the new-born infant, incited by unerring instinct, desires and seeks and sucks the maternal milk as the sweetest and best aliament, destined by the Universal Parent for its earliest sustenance: and, children* require and prefer and prosper under the use of foods artificially commingled and prepared.—Instruction together with gratification may be derived from an attempt at comprehensively discriminating the preferable methods of nursing young ones, and of rightly adapting the management of their diet to the circumstances of their health and age:—and this suggests advantage in premising a description of the nature and qualities of milk,—the only proper nutriment and the delight of an infant's primeval days.

Whether it be regarded as an article of nourishment or a medicinal agent, milk forms an important subject of consideration to every one who takes interest in the health and well-being of his race. Generally, and in all animals, it is a white, untransparent, bland fluid, somewhat heavier than water, and impregnated with varying proportions of saccharine matter. Its constituent parts are,—serosity or whey, curd or the cheesy formation, butter, and sugar of milk which, in common with all the gummy substances, affords the elemental body named, by some chemists, the saccholactic, and by others the mucic acid.

In the different classes of mammiferous animals, these milky elements exhibit distinct variations. Each kind of milk is distinguished by a particular taste which can be discriminated by experienced observers, and an odour that is speedily dissipated, on the fluid being exposed to the influence of atmospheric air, or submitted to ebullition. That of the cow forms the best subject for analytical investigation; and, on this account, is also the most appropriate standard with which, in regard to their natural constitution, the milk of sheep, goats, the ass, the mare, and human female, has usually been compared. For such reason, a view of its properties may be exhibited in detail.

Whey enters, to the extent of about nine-tenths of the whole, into the composition of milk:—it, also, holds curd and butter in suspension. For obtaining it in the purest state, before its acids are developed, new drawn milk should be coagulated with the flowers of thistles or artichoke, or with rennet, or soluble tartar, or vinegar. These flowers do not indeed produce this effect so rapidly or with so much certainty as the rennet; but this, on the other hand, almost always in one degree or other affects the taste of the whey:—cream of tartar determines a similar result; and, moreover, adds a new salt to the milk. Vinegar, therefore, if sparingly employed, is a preferable agent.—Whatever of free acid has place in whey, is readily neutralized by the earthy or alkaline bases it contains.

Whether it be intended for a beverage, or medicine, or for chemical investigation, whey may be procured by putting a table-spoonful of pure, mild-flavored vinegar into two English pints of boiling milk; and, when coagulated, this is to be passed through a close hair-sieve upon a piece of linen or unsized filtering paper. These filters, however, often slightly change the naturally bland agreeable taste of the whey. For the purpose of clarifying this liquor, the white of one egg diffused by beating it in four or five times its own weight of water, should be added, and the whole filtered a second time.—Whey thus prepared, is perfectly limpid, has a yellowish-green colour, and a mild delicious taste, approaching to that of milk. Like its parent fluid, it is always slightly acidulous, even when separated

* The reader will observe the distinction taken between infant and child.]

by rennet: and this quality depends on the presence of the butyric and acetic acids. When exposed to the air, it rapidly undergoes important changes;—its acidity gradually increases;—and it deposits minute curdy flakes.—The acid proceeding from the decomposition of whey reddens purpled paper, and is named the *lactic*:—it acquires the consistence of extract or syrup, when concentrated. Lactic acid, then, appears to be a formation originating in the decomposition of sugar of milk; for, it cannot be detected in whey that has been completely soured.

When heated, whey gives out, at first, a considerable quantity of a pellucid watery fluid, less odorous than what is yielded by pure milk; but which, like it, contains butyric acid and some animal substances. On the heat being augmented, the liquid gets a greenish-yellow colour, and becomes viscid as honey. If allowed to cool in this state, it deposits its saccharine principle in yellowish crystals. By re-dissolving these in water, clarifying the mixture with whites of eggs, and evaporating it to the consistence of syrup, pure sugar of milk in the form of white crystals, is obtained. This substance is semi-transparent, and has the mild sweetish taste peculiar to the milk of many animals:—by some chemists, its formation has been referred to the vital action by which milk itself is secreted. With respect to its physical properties, it appears to hold a middle rank between sugar and gum:—like these also, notwithstanding its animal origin, it is quite destitute of azote. It melts in twelve parts of cold, or in four of boiling water, but is quite insoluble in spirits of wine, unalterable by the action of external air, and altogether insusceptible of the vinous fermentation.

Human milk yields more of this substance, than that of the ass, cow, goat, or sheep. Creamed milk contains, in a thousand parts, about thirty-five, and the cream itself, about forty-four of the saccharine matter:—but, a multitude of circumstances are prone to determine irregular results from experiments instituted for such purposes. Among these causes may be ranged,—variety of food and of climate,—a state of health or disease,—and in the human female, the all-powerful influence of the moral affections.—All these remarks tend to show that whey has for its component parts,—an excess of watery fluid, some traces of the butyric and acetic acids, a minute proportion of sugar of milk, and a very small quantity of gelatine;—and, of course, is next to useless as an article of food, however refreshing it may be as an ordinary or medicinal drink.

Curd, or the cheesy substance of milk, though generally constituting about an eighth part of its composition, varies as much as any other of the elements of that valuable fluid. For the purpose of obtaining it as pure as possible and free of butter, it should be extracted from milk, the cream of which has first been carefully removed. So long as it remains in soft masses, it is white and semitransparent:—when formed into grained particles, by the expressure of its whey, it becomes opaque, but still preserves its delicate whiteness. Its taste is mild, fresh, and agreeable. Its particles, however, always retain a certain quantity of whey which it is difficult to separate. When deprived of this, it is still mild to the taste, dry, brittle, and will remain for some time exposed to the air without undergoing any change. If the whey, however, be not entirely expressed, the curd forthwith becomes sour, gets mouldy, softens and exhales a very foetid odour, and acquires successively the different shades of red, brown, and blue. Finally, the putrescent mass passes into a kind of soap, formed by the combination of ammonia with the oily substance which results from this decomposition. Curd, in such a state, continues to be equally soluble in water, as it was before the latter change supervened.

(To be Continued.)

A DESCRIPTION OF THE HETTON RAIL ROAD, IN ENGLAND,

The Hetton Rail Road extends from the town of Sunderland, on the river Wear, to the Hetton Collieries. Its length, from the pit to the staith, is seven miles five furlongs. It has an *ascent* of two hundred and sixty-six feet; and a series of *descents* equal to five hundred and forty-six feet, making in the whole eight hundred and twelve feet of elevation and depression, overcome by a series of *levels* and *inclined planes*. The first portion of the road, from the pit to the foot of the ascending plane, is one mile seven and a half furlongs in length; and its general descent is one-ninth of an inch to the yard, (with a portion of it, five-sixteenths,) which is equally favourable for loaded and light carriages. A single loco-motive engine, with twenty-four wagons in train, has drawn six hundred tons per day, going nine *galls*, equal to thirty-five miles forwards and returning.

On another portion of the way, in length two and a half miles and sixty yards, with a descent, for the greater part, between four and five-sixteenths of an inch to the yard, on which the loaded wagons tend to move of themselves, and consequently produce less stress on the light train—two loco-motive engines, in use at the same time, have conveyed the quantity above mentioned.

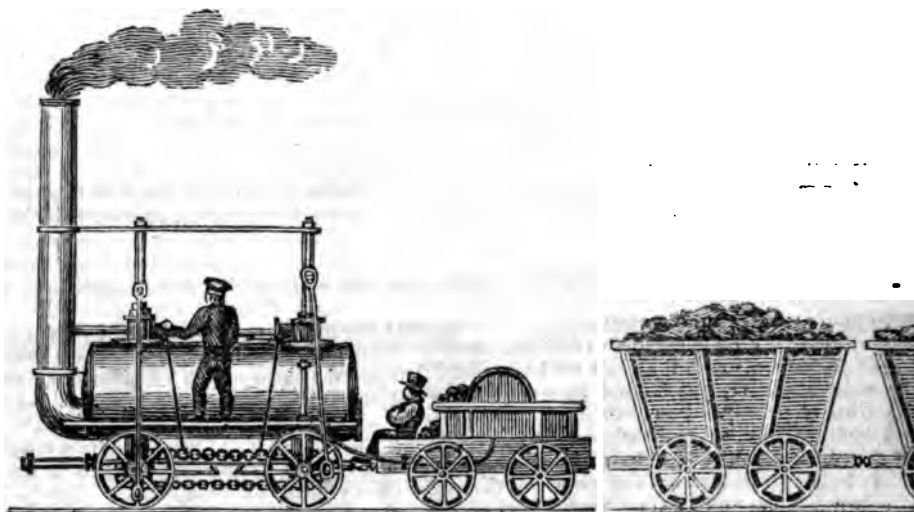
Stationary *reciprocating engines*, are placed at the summits of the inclined planes. These engines draw laden and light wagons, alternately each way; and each successive station performs its operation

GENERAL VIEW OF THE HETTON RAIL WAY,

Town of Sunderland.



1. Staith.



Loco-motive Engine, twelve horse power. | Tender, with coals and water.
Cost in England, 600*l*.

BY WILLIAM STRICKLAND, ESQ. CIVIL ENGINEER.

in the same time; the relative speed of the wagons being according to the distances between the engines, so that their respective journeys may be completed in similar times, and maintain a uniform succession of carriages each way; by means of ropes, alternately winding and unwinding upon drum wheels, eight feet in diameter.

On one of the inclined planes, the ropes are upwards of two miles in length, being supported by light cast iron concave rollers, fixed at a distance of forty or fifty feet apart, in the centre of the way, between the rails; and as the ropes are *wound on* and *off* the drum, the small rollers revolve, and keep them from coming in contact with the soil of the road.

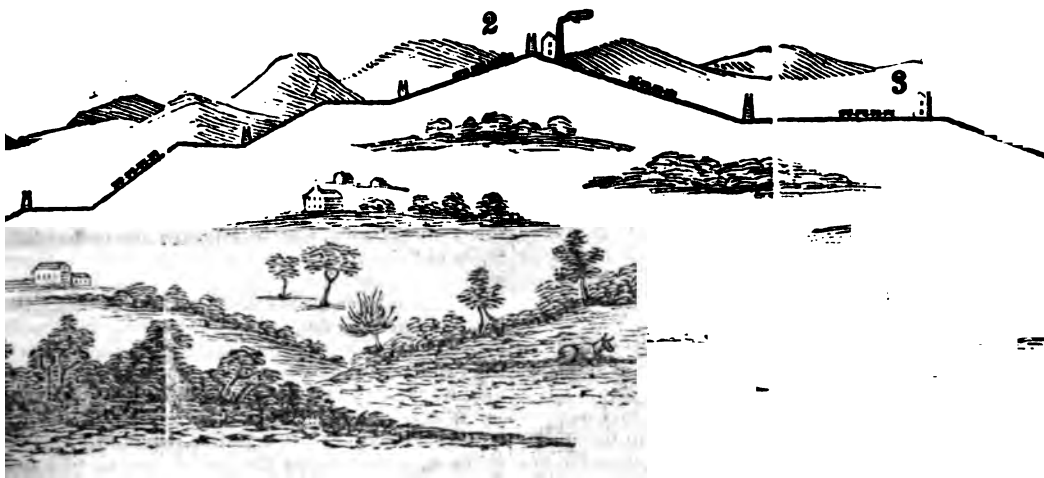
Where the road-way deviates from a straight line, *in plan*, or where the *plane* winds to the *right* or *left*, the axes of the rollers are placed in nearly a vertical direction; in order to keep the line of draught midway between the rails.

It will be perceived by the Engraved View, that this road is formed over an undulating, or hilly country; and that the transportation of all the articles from the collieries and its neighbourhood, is made to surmount a series of very considerable ascents, by means of fixed engines, placed on their summits; and the motion given by these machines to the wagons reciprocally, is equal to nine miles an hour.

The rails are made of cast iron, four feet in length; and are known generally by the denomination of the edge, or round top rail, of Losh & Stephenson.

The loco-motive engines are made of thick sheet iron, and are obviously of the high-pressure kind; they are only made to ply upon *level lines of road*; for the engine itself, in any material ascent, consumes a great portion of its power in the movements of its own weight, and that of its fuel; and any sudden rise would annihilate its object and use.

LEADING FROM THE COAL MINES TO THE TOWN OF SUNDERLAND.



2. Fixed Engine.—3. Fixed Engine.—4. Pit.

Whole length of the road, 7 miles and 5 furlongs. The elevation and depression overcome, 812 feet.

From "the Fixed Engines" at the summit of each elevation, extend ropes each way, which on one side *draw* up the train of wagons, on the other *lower* them to a level, upon which they are conveyed by the *loco-motive* engine, until they reach an ascent or descent, when the ropes from another reciprocating engine are attached.

The figure below is admirably illustrative of the appearance of the loaded train while upon the level.



The train consists of 24 Chalder wagons, containing 90 tons.

SPORTING OLIO.



[From the Petersburg Intelligencer.]

ANNALS OF THE TURF—No. 1.

It must be interesting to the amateur, the sportsman and the breeder, to give a correct, though concise account of the most distinguished turf stock of blood horses, which existed in Virginia between the years 1750 and 1790, a period more remarkable for fine horses, than perhaps any other, either prior or subsequent to that time.

It was during this period, that "races were established almost at every town and considerable place in Virginia; when the inhabitants almost to a man, were devoted to this fascinating and rational amusement: when all ranks and denominations were fond of horses, especially those of the race breed: when gentlemen of fortune expended large sums on their studs, sparing no pains or trouble in importing the best stock, and improving the breed by judicious crossing." The effects of the revolutionary war put a stop to the spirit of racing until about the year 1790, when it began to revive, and under the most promising auspices as regarded the breed of turf horses; for just at that time or a little previous, the capital stallion Old Medley was imported, who contributed his full share to the reputation of the racing stock, whose value had been before so well established. Previous to the year 1800, but little degeneracy had taken place either in the purity of the blood, the form or performances of the Virginia race horse; and in searching for the causes of a change for the worse, after this period, the most prominent one was the injudicious importation of inferior stallions from England. About the period of time last mentioned, Col. Hoopes and many others, availing themselves of the passion for racing, inundated Virginia with imported stallions, bought up frequently at low prices in England, having little reputation there, and of less approved blood, thereby greatly contaminating the tried and approved stocks which had long and eminently distinguished themselves for their feats on the turf, their services under the saddle, and as valuable cavalry horses during the revolutionary war. In recommending renewed efforts to the Virginians, for the further improvement and preservation of their stock of blood horses, the necessity and importance of the immediate publication of a Stud Book, (and of a racing calendar hereafter) cannot be overlooked.

It is the wish of the writer, that the tendency of this, and of the following numbers, may excite a spirit and a desire for such a work, by shewing that there are valuable materials extant, only requiring diligence and zeal to bring them to light, capable of being made up into a valuable publication on this subject. The want of such a work as a Stud Book, is now lamentably seen and felt in Virginia, where few pedigrees of any particular stock can be traced far back, before they are lost in the mazes of uncertainty and conjecture. It may safely be asserted that the stock of horses in Virginia, never can arrive to that degree of improvement and perfection, and more particularly high value as to price, they otherwise would do, unless a record of this kind is published and preserved, to be resorted to for a correct knowledge of their blood. In breeding for the turf and selling turf horses, blood is every thing; as it has been found that particular strains or pedigrees of horses of this class, are remarkable for their speed and bottom, while others are miserably defective in these essential qualities of the race

horse. A Stud Book and Racing Calendar will be a standing record, always enabling us to avoid the bad, and to cherish those particular strains of horses, that have established their good qualities for the turf. How has Virginia been injured in her racing stock by some particular stallions, bred in that state, Potomac for instance, who although they raced it well, yet being badly bred, propagated an inferior race of horses?

Let me therefore, emphatically remind the breeder of the race horse, to use great particularity and caution, as to the stallions from which he breeds; examine well into their pedigrees, and to the qualities of the stock from which they are descended; as an experience of more than a century in England has proven the fact, that where a stallion has been stained with an inferior or "dunghill" cross, however remote in his pedigree, it is certain to mark out and exhibit itself in his progeny, no matter how well he may have raced it himself.

We should breed back as much as possible upon the good old stocks of Jolly Roger, Janus, Morton's Traveller, Fearnought and Medley, of which I propose to give a particular account in some succeeding numbers. It has been well for us, that the importation of stallions from England has long since ceased, and I hope never to see it revived again. The sod of the Bacon course (4 miles and upwards) is now too little trod by the English race horse: short races with light weights are now too common: the consequences are, that their stock of blood horses are rapidly losing that stamina and inherent goodness of constitution or stoutness, which enabled them in former days to carry high weights, and to support frequent and hard running. Fifteen or twenty years ago, the Virginians bred altogether from imported English stallions, and at that time also, there were more sportsmen on the turf: yet we have at this day better race horses under less patronage from American bred stallions, than at that day. Does not this conclusively prove, that by adhering to our own stock, and breeding from large, highly formed, full blooded stallions, that our turf horses will soon equal or exceed any in the world? And as our race stock is considered stronger and more active, it will be found advisable to breed them for the saddle, plough or wagon.

AN ADVOCATE FOR THE TURF.
(To be continued.)

MISCELLANEOUS.

SILK WORMS.

We notice in the American Farmer of June 2d, a note to the editor of that paper, from Ennals Martin, Esq. of Easton, Talbot county, in which he expresses a wish to be furnished with eggs of the silk worm. Mr. John Randall, jun. of this city, who has a few worms that have completed their work for this season, will, we are authorised to say, gratuitously and with pleasure, supply gentlemen desirous of propagating the silk worm with a sufficiency of the eggs to make a beginning. Such gentlemen have only to address a note to Mr. Randall, who will gratify their wishes, and put them in possession of his mode of managing the worm.

[Annapolis pa.]

SCRAPS.

[From late English papers received at the office of the American Farmer.]

A plant named *Aerial Epidendrium*, a native of Java and the East Indies beyond the Ganges, is kept in houses suspended from the ceiling by a string; where from year to year it continues to put forth new leaves, new blossoms, and new fragrance, excited alone to new life and action by the stimulus of the surrounding atmosphere.

Dr. Patterson of Calcutta, has observed, that the skulls of Hindoos are to those of Europeans, as two to three; or that the head of an European of fifteen years is equal in size to that of a Hindoo of thirty. If the size of the head indicate a corresponding intellectual capacity, it may now be conceived how 20,000 Europeans have in subjection 100,000,000 Asiatics.

A gentleman at Gloucester has tried an experiment upon his trees, which is very likely to succeed and deserves to be known. Previous to their budding out, the wood was washed over with linseed oil, applied with a common painting brush. This appears to have rendered them completely impervious to frost, and they seem likely to bear an abundance of fruit.

Cherry-trees will not grow at St Helena; while gooseberries and currant-trees become evergreens there, but do not bear any fruit.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 16, 1826.

THE LATE CATTLE SHOW.—We do not deem it necessary to expatiate, at this time of day, on the utility of agricultural exhibitions. It were a vain task to attempt to excite those who have been so indifferent as not to have thought upon the subject; and yet more vain to think of removing the prejudice of those who, having reflected, are yet not convinced of the tendency of such exhibitions to elevate the character, and to improve the actual condition of the farming class of the community. Were it possible to believe that there existed any doubt in regard to their practical effects, in enriching the land, augmenting its produce, increasing the profits of labour, meliorating our domestick animals, in a word; in bettering in all its branches the husbandry of a whole state; reference might be made at once, to the effects produced in all these respects, by the influence of the Massachusetts Agricultural Society, as demonstrated by the hon. J. Lowell, (see Am. Farm. vol. 6. p. 267.)

To every one who reflects upon the subject, it must be matter of special wonder that the farmers of Maryland, and more especially in those counties most convenient to the scene of exhibition, should appear so insensible to the bearing which these shows have upon the value of their property, the credit of their own profession, and the intelligence and interests of those who are to follow them in the same line of life! Of this indifference, nobody can doubt who was at the last Cattle Show; and if any who were not there ask for the proof of it, let them take the handbill and compare the list of premiums offered, with those which were actually taken; and they will find that though many were given where there was no competition, still there remained, unclaimed, in number, nearly as many as were awarded. Yet there was not a premium offered for an object not embraced within the regular and proper pursuits and economy of Maryland farmers and housewives—and in regard to which every one who pretends to make his living by farming, and takes a pride in good management, ought to be proud to excel.

Let us take up each object successively, in the order of the handbill, and make a few remarks on the plan and policy of the trustees, and the manner in which their views have been met by the farmers of the state, for whose exclusive benefit this Society has been established, although its funds have, to a great extent, been contributed by merchants, lawyers, doctors, &c., residing in this city. And here, as the subject opens upon our view, it is easy to see that our observations will fill a greater space than we had at first thought; and lest the patrons of this

journal in other states (in many whereof, be it known, they are far more numerous than in Maryland,) should take exception beforehand to what they may apprehend will be too local. We promise them to give to much of what we shall say, such general scope and bearing as shall embrace the general interests of agriculture, and be in many respects applicable, especially to the views and policy, and regulations of all *agricultural societies*. First—as to

FARMS.

The highest premium was a beautiful silver bowl, which cost fifty dollars, and was offered "for the farm of not less than 100 acres, which shall appear to have been cultivated with the greatest economy and *nett profit*, consistently with its permanent improvement; reference being had to its natural advantages as to soil, situation, &c."

In offering this premium, it was the wish of the Board to attract the notice, to appeal to the pride, and to elicit the experience of every good farmer in the state. How could that be better done than by the terms of the offer? In the first place, the farm is limited to 100 as the minimum number of acres, to prevent it from being said that mere amateur farmers, with small places near cities, would have an advantage over others who were farther from livery stables, and who followed farming for a live lihood; and every other restriction, specified in the terms of the offer, was adopted with the same sedulous care to hold out the prize to *bona fide* farmers. Respect was required to be paid to the *economy* of the cultivation, and the *nett profit* of the farm, *consistently with its permanent improvement*; and the judges were required to make allowance for its *natural* advantages as to *soil, situation, &c.*, so as to estimate the degree of credit due to the *skill* and *industry*, and *management* of the proprietor—and again, that envy and ill nature should see nothing to carp at, this beautiful and valuable premium was offered on terms equally fair for the *whole state*. Three gentlemen were appointed in every county on *both shores*, distinguished for sound judgment and good character, whose duty it was, on the call of any candidate for the premium, to view his farm; and finally to make particular report to the society of the two in their respective counties which they might adjudge to be most worthy. That their views might be clearly understood, and that none might plead ignorance, a publication was made in the *American Farmer*, of September 2, 1825, and from that in many of the gazettes, from which the following extract is here made, not only to prove the fairness of the offer, but to present the plan of it, for the consideration of all agricultural societies:

"Premiums for the best cultivated Farms.

"The Maryland Agricultural Society has offered a premium of a piece of plate valued at \$50, 'for the farm of not less than one hundred acres, which shall appear to have been cultivated with the greatest economy and nett profit, consistently with its permanent improvement; reference being had to its natural advantages as to soil, situation, &c.

For the second best, particulars as above, a premium of a piece of plate valued at \$30.

"In order that every farmer and planter in Maryland, may have an equal opportunity of entering into competition, the trustees have appointed three gentlemen in each county of the state, to examine and report the applications for the above premiums, in their respective counties.

"The trustees rely on the known zeal and devotion to the cause of agriculture, of the gentlemen whom they have taken the liberty to place on these committees. If, however, any of these gentlemen cannot act, it is expected that each person declining the trust will prevail on some other in his county to supply his place, and will inform the corresponding secretary of the change.

"The duty required of these committees, will be,

to receive the applications of those who wish to offer their farms for the premiums; to view the farms of the applicants; to obtain from each a statement as accurate as practicable, of the size of his farm, the quantity of different manures used, his kinds of crops, the quantity of each; the number of hands, horses, mules, and oxen employed; the number of cattle, sheep, and hogs kept, raised and sold, and their produce in milk, butter, cheese, wool, &c.

At some convenient time, the committees can meet, compare the different farms they have examined, and select the two which they consider the best in their respective counties. A particular account of each of these may then be transmitted to the corresponding secretary at any time previous to the next Cattle Show. At the Cattle Show, the Trustees will select three gentlemen from among the members of the committees attending, to whom the corresponding secretary will deliver all the reports he has received; these three gentlemen will compare the different statements, and will award the premiums to the persons whom they think entitled."

Now then for the *conclusion* from all this, to which we would draw the attention of all those who pretend to take a pride in agricultural pursuits, who pay the feeble tribute of *verbal* applause to agricultural societies, and especially to those who undertake to assume the task of controlling its proceedings.

Here was an elegant piece of plate, of intrinsic and lasting value, to be inscribed with the approbation of an incorporated State Society, for honorable excellence in the most honorable of all pursuits—to be handed down from father to son, as long as the salutary sentiment of family pride, and the emulation of ancestral industry and virtue should endure—a prize more honorable than blood stained laurels; and yet—(shall we say it?) amongst all the farmers of Maryland, not excepting the Trustees who offered the premium, there were but two that possessed the spirit and the consciousness of excellent management, to enter the lists. Be it remembered, there was no standard of great productiveness, by which the farm was to be measured. The road for competition was wide as the state itself. The terms were simple as language and liberality could make them. Where then is the encouragement for those who have no direct concern in agriculture, to spend their time in upholding a society, when those for whose exclusive benefit it is designed, betray such palpable indifference to its success; when even those who have been selected to manage its concerns, from their zeal and liberality, and the extent of their landed possessions, fail, convenient as they all are to the ground, to exhibit (with a few exceptions that shall be noticed,) one single specimen of the beneficial effects of the association, even upon themselves.

They all know our great respect for and attachment to them, individually; but a sense of duty compels us to say, that in reference to the last Show, a pernicious example of inertness was set by those who, animated by a spirit more becoming their stations and talents, might have from their own resources made the last Cattle Show honorable to themselves and creditable to the society.

We must not, however, despatch the subject of farms, without paying to Mr. Dorsey the just compliment to say, that though a greater number of rivals might have brightened his premium, it is not probable that he would have lost it in the widest and most multiplied competition. Well would it be for society, that all agricultural honours were as well earned and as justly bestowed!

[To be continued, as room and leisure can be found.]

✂ The next meeting of the Trustees of the *Maryland Agricultural Society*, will be held at Dalton, the residence of Dr. A. Thomas, on Thursday next, June 22nd.

✂ THE BOSTON COURIER AND GALAXY.—All persons desirous of subscribing to either of the above named journals, are hereby informed that orders for them, accompanied with the *subscription money*, will be received and forwarded by the Postmaster of Baltimore. Sensible of the kindness he has received from many editors throughout the union, Mr. Skinner is prompted to give general notice to all who get their papers from whatever quarter, through the Baltimore Post office, that he will most cheerfully receive whatever may be due to the editors of said papers, and will transmit the same without charge to the parties: none therefore, need allow arrearages to accumulate for want of an agent to receive them here.

Mr. V. owned a negro wench and two cows: one of the cows was sold and the other loaned to Mr. B. The wench had twins, and each of the cows had twins whilst in the possession of Mr. B. all six of the offspring were female, and lived.

RINALDO—This thorough bred, and very superior Stallion, five years old this spring, from the stud of the Hon. John Randolph, of Roanoke, arrived in time to be exhibited at the late cattle show. He will remain during this season under the control of Messrs. Hambleton and Winder, at Easton, in Talbot county. The want of a trustworthy groom, and of time to make the requisite arrangements, prevented him from being placed, for this year, on the York and Reisterstown roads.

EXTRACT OF A LATE LETTER TO THE EDITOR.

I do not like to close my letter without making some report of the state of our agricultural concerns, as I know the interest you feel in the affairs of that class of the community every where; but really I am almost afraid of incurring the common charge against our whole fraternity, of exaggerating our troubles, were I to tell you the whole truth with regard to our present state and future prospects. You know something of the general character as to productiveness of my own estate, and that it is reasonable to conclude that I fare as well as my neighbours; now this is a fair summary of my own agricultural condition, my crop of wheat will be little more than one half what I reasonably concluded upon; the best clover fallow withstood as it generally does all the ordinary casualties incident to the wheat crop, but has recently been assailed by a new, unlooked for, and most formidable enemy, a black caterpillar, which made its appearance about the 25th of May, and it is worthy of remark, that after extensive and minute inquiry, I have not been able to ascertain a solitary instance of their originating or making their first appearance any where else than in the clover lay: they do not however confine their depredations to the spots on which they were generated or to the vegetation that immediately presents itself, after stripping the wheat of all the green leaves and devouring all the tender underling heads, they set out *en masse* in quest of new grounds and fresh food, in their way they devour all the common grasses, oats, corn, and in one instance on the farm of V. Maxcy, esq. in their march they came across a tobacco bed, and devoured every species of vegetation in it. This new enemy combined with the drought and Hessian-fly, have not been less destructive to our agricultural, than their great prototype the Holy Alliance has been to the moral and political prospects of those who were unfortunately subjected to its equally loathsome influence. So much for our main dependence, the wheat crop; our oats have failed totally, as has also the young clover and all sorts of grasses sown this spring; I sowed 200 acres in clover, timothy, orchard grass and lucern, and do not calculate upon having an acre fit to cut next spring. Our hay harvest is over and has not yielded 500 wt. to the acre upon the best soil; I had planted in the

last week of April 3 acres of carrots, parsnips and mangel wurtzel, which came up badly in consequence of the drought at that time, and since had so completely perished that I have ploughed up the ground and laid it down in ruta bage. The pastures have failed entirely, and in many places the grass is dead to the extremities of the roots. Our streams have ceased to run for weeks past, and it is with the greatest difficulty we can obtain water for the stock. The young trees set out last fall and which put forth strong and healthy shoots this spring, are now dying rapidly. The garden affords us no vegetables, and in truth there is no object upon which the eye can rest that does not add another melancholy feature to this picture of misery, except the Indian corn, that is still promising: the peculiar character of this plant seems to be, that if it has not in the early stages of its growth been rendered tender and succulent, by much moisture, it will endure any degree of dryness, (provided it is accompanied with 90 degrees of heat) until it arrives at a certain age, when moisture becomes essential to its further progress to maturity: it is now in that critical state, and if it does not please providence to bless us with rain in the course of the ensuing week, we shall be bereaved of this last and only hope. I come now to our great staple, the tobacco crop, and in a few words will give you a fair estimate of the prospect. In my immediate vicinity, and it is not more flattering as far as I can learn in the adjacent county, where you know the bulk of the crop is made, it is no longer within the reach of any change of weather, to afford more than a fourth of a crop: as to myself, I do not calculate upon making more than 10 hogsheads under any circumstances, and I may not make 5, and certainly shall not, if there is no rain during the ensuing week, and I laid out for at least 80 hogsheads. But enough of these miseries. I thank God that there is a portion of the community whose lot is cast elsewhere, and who will be no farther involved in our distresses, than may be induced by sympathy with the unfortunate.

MARKETING—Butter, per lb. 25 a 31 cts.—Eggs, per doz. 15 cts.—Pork, per lb. 6 cts.—Beef, prime pieces, 12½ cts.—Mutton, 6 cts.—Veal, 8 a 10 cts.—Potatoes, per bushel, \$1—Peas, \$1.50—Beans \$2—Chickens, per doz. \$2 a 2.25.

LIVE CATTLE \$6 a 6.50

THE THOROUGH BRED STALLION RINALDO.

By Sir Archy—bred by the Hon. John Randolph, of Roanoke, Virginia, will stand the present season at one of the subscribers' stables in EASTON, at the low price of fifteen dollars the spring's chance, which ten dollars will discharge if paid by the first of October next—\$5 the single leap, and \$20 to insure a mare with foal—25 cents in each case to be paid to the groom. The season will be extended to the first of August, or longer if required.

RINALDO is fifteen and a half hands high, and five years old this season, is a horse of uncommon bone and muscular powers. He is a deep or blood bay with black mane, tail, and legs—has never covered a mare, having just arrived from Roanoke in Virginia. He was got by Sir Archy, (who is now covering at \$75 the spring's chance): his dam Miss Ryland, by Gracchus, Dute by Sir Vanity, by Celer, Mark Anthony, Jolly Rodger, American Farmer of April 9, 1824. Although a horse of fortuitous circumstances enable the subscribers to offer the services of Rinaldo unprecedentedly low, it is a fact, susceptible of proof, that he cannot be purchased for less than \$2,000. We are mainly indebted to J. S. Skinner, Esq. to whose care and direction Mr. Randolph entrusted this noble animal, for enabling us to offer his services at a price within the reach of the farmer, and so much below the price now paying for citizens of other states for the services of horses on the same stud. Good pasturage may be procured in the neighbourhood of Easton for horses, and as Rinaldo will stand at a low price, it is probable that he will be in high demand.

The following extract from the advertisement of Roanoke, a brother of Rinaldo, now covering in Virginia, will be found applicable to him:—

"Like his sire, he is fit for the dray, wagon or coach, as well as the turf, the field and the road, in short for every purpose to which this noble animal can be applied, but that of a shooting poney."

EDW'D N. HAMBLETON,
EDW'D S. WINDER.

SINCLAIR AND MOORE,

Have received, and offer for sale, a second hand *threshing machine*, imported by W. Dawson, Esq. late British consul, with which the owner has got out from 75 to 100 bushels of wheat per day: it has been used two seasons, and is out of repair, and will be sold at one half of its original cost; it can be repaired by an experienced workman by the day, if required, at the cost of the purchaser.

Our white flat and yellow bullock turnip seed, is now threshed and looks fine, the quality we can with confidence recommend to our friends.

SALE OF ELECTORAL SAXONY SHEEP,

Imported by Adolphus Pohlitz, a native of Leipsic, in Saxony, on Friday, the 23d of June, at Thomas Swift's, New Bull's Head, Third Avenue, will be sold at public auction, the entire flock of Saxony Sheep, imported in the well known Hamburg brig Maria Elizabeth, Capt. Fokkes, from Hamburg. These sheep were selected by the same shepherd who attended the former two flocks imported into Boston, and of which that one at Brighton gave so general satisfaction to purchasers. They were selected after a minute examination from the Electoral flocks in Saxony, without regard to trouble or expense, and some were by permission obtained from the flocks of his Saxon Majesty's domain. At former importations, so much has been said in praise of these animals, so valuable for this country, that the importer abstains from saying much in their favour, and invites farmers, manufacturers, judges of wool, and admirers of fine sheep, to come and see, and then judge for themselves. The importer flatters himself that his respectable connexions in Saxony, together with the well known merits of Mr. Grove, the above mentioned shepherd, has enabled him to procure sheep of the finest fleeces and purest stock and descent; and he thinks it impossible to import any superior. The whole number shipped in Hamburg was 180, of which about one-half are bucks, who in point of beauty and strength, and fineness of their fleeces, can scarcely be equalled. Samples of the wool, and certificates of each sheep, can be seen at Mr. F. Gebhard's, corner of Rector and Greenwich streets, No. 91. The sheep can be examined at the New Bull's Head, any time before the sale, which will take place as advertised, at 10 o'clock, A. M. Every sheep shall be sold without any reservation, at public sale. None will be sold at private sale previous on any terms.

M. HOFFMAN & SONS, Auct'rs.
New-York, June 10.

FOR SALE.

Two ewes and one buck, and three buck lambs of the improved Bakewell and Dishley breed; they are handsome, with bald faces and legs, the wool is used in Great-Britain for the manufacture of stuff goods, such as camblets, bombazines, circassians, &c. The mutton is very fine, and pretty large, but not so large as the Dishley alone, which is considered an improvement on that breed. The stock is pure, and sprung from a pair captured during the late war, going out it was said, to the governor of Nova-Scotia, to improve the stock of that country; and sold as prize in the city of New-York. The old lady is still in possession of the present proprietor, and although ten or twelve years or more old, has a very fine lamb this season. Apply to the Editor.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	7 50	8		
BACON, and Hams, . .	lb.	6	9	9	18
BEES-WAX, Am. yellow	—	31	33		50
COFFEE, Java,	—	17	17½	22	25
Havana,	—	15	17		20
COTTON, Louisiana, &c.	—	13	14		
Georgia Upland, . . .	—	11½	12½		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	13	16	19
Dipt,	—	10	11		14
CHEESE,	—	8	10	12	15
FEATHERS, Live, . . .	—	30	31	37	
FISH, Herrings, Sus.	bbl.	2 37	2 50		
Shad, trimmed, . . .	—	7 00			
FLAXSEED, Rough, . .	oush	75		87½	
FLOUR, Superfine, city,	bbl.	4 25		5 00	
Fine,	—	4 00	4 50		
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	67	70		
Wheat, Family Flour,	—	90	95	1 00	
do. Lawler,	—	75	85		
do. Red,	—	85	92		sales
Rye,	—	68	70		
Barley,	—	80			
Clover Seed, Red . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed, . . .	—	2 25		3 00	
Oats,	—	56			
Beans, White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	15		25	
HOGS' LARD,	—	7	9	12	
LEAD, Pig	lb.	8½			
Bar	—	8	8½		
LEATHER, Soal, best,	—	23	24	62	
MOLASSES, sugar-house	gal.	45		62½	75
Havana, 1st qual. . .	—	30	31	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar,	bbl.	1 37½			
Pitch,	—	2 25			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	31	33	40	
Spermaceeti, winter .	—	70	75	68	
PORK, Baltimore Mess,	bbl.	11 00	12 00		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	4 12½			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	7½	8	10
WHISKEY, 1st proof, .	gal.	29	30	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	36		50	
SUGARS, Havana White,	c. lb.	13	13 50	15	16
do. Brown,	—	9 00	9 50		
Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	23
SPICES, Cloves, . . .	—	75		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes, . . .	bush	43	45		
Liverpool Blown . .	—	45		75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	
do. Sicily,	—	1 15	1 20	2 00	
Lisbon,	—	1 15	1 20	1 50	1 75
Claret,	doz.	4	8	5 00	6 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full b'd	lb.	30	35		
do. crossed,	—	20	27		unwashed
Common, Country, . .	—	15	20		but freew
Skinner's or Pulled, .	—	20	25		res.

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AGRICULTURE.

ON LIME AS A MANURE.

Agricultural Society of the Valley.—May 29, 1826.

A letter from Wm. B. Page, Esq. enclosing a communication from E. Ruffin, Esq. was received, and the communication from Mr. Ruffin ordered to be printed.

DEAR SIR, *Coggin's Point, October 20, 1825.*

Your letter reached me only a few days before the commencement of a long journey, which has prevented my attending to your request until this time. I shall now endeavour to answer your inquiries as fully as my limited means will permit; though I cannot expect to furnish any thing of more value than loose hints, which perhaps may serve as subjects for a Frederick farmer to think about, but not as rules to direct his practice.

It should be observed, that though I have applied *mild lime* to more than 500 acres, scarcely any use has been made by me of *caustic* or *quick lime*; and therefore I have no practical knowledge of its peculiar solvent power. According to the theory of Davy, while lime continues caustic it acts powerfully on all animal and vegetable matters in contact with it—breaking down and rotting whatever is hard, insoluble and inert—and driving off or destroying whatever is already rotten, or fit for the immediate use of growing plants. Hence, we may infer that the mere causticity of lime will be serviceable or hurtful, according to the state of the vegetable ingredients of the soil. But as usually applied, quick lime becomes as mild as before burning, by again absorbing carbonic acid from the atmosphere, before its solvent power can be exerted. Nor do I think this power can safely be used in our climate, except in very few cases; as on broom-straw old fields, or newly cleared poor woodland, which contain much inert, and but little active or soluble vegetable matter. Under our hot summers, vegetable manures rot too fast, and the cultivator should endeavour to retard, rather than hasten their decomposition. But a different practice may be proper in colder climates. Frequent applications of caustic lime must be highly useful in Scotland, for example, where vegetable matters, unrotted and insoluble, have continued to accumulate and extend, until one sixth of that country is covered with barren peat.

It follows then that however powerful may be the effects of caustic lime, they must be considered as separate and distinct from the durable and far more valuable effects of mild lime, or calcareous manures in general. The same substance, (quick lime) will at different periods, act as two kinds of manure, entirely different in their modes of operation; and on the other hand, many substances having different names, (as old burnt lime, chalk, shells, limestone, leached ashes, and marl,) all have different proportions of the same calcareous ingredient, and ought to be considered as the same manure. Yet most writers class these manures under different heads, without knowing the sameness of their predominating qualities; and many absurd practises owe their origin and continuance to the same error in our practical men. Thus the industrious farmers of Long Island have long used as a manure, leached ashes, brought hundreds of miles by water: they have even sometimes stripped the soap factories in Petersburg, paying five or eight cents the bushel, besides the expense of so long a transportation. Yet whatever benefit was obtained from this manure, they might have found as well in the fossil shells which I believe lie beneath the surface of all Long Island, and which even if carried the same distance, might be applied at less than half the cost of an equal value of ashes. Your remarks shew that we agree in this view—and that you correctly

consider our calcareous manures as substantially the same, though your practice may be confined to calcined limestone, as mine as been to fossil shells.

I now proceed to answer your particular inquiries. You ask my "opinion as to the utility of lime as a manure in general; to what crops and in what mode it is most advantageously applied; and whether there is reason to believe that it would be adapted to limestone soil like ours, originally rich, but in many places much worn by cultivation?" I never was in Frederick, and know but little of its soils, except that they generally differ from those on which my practice has been tried, and with which I am best acquainted. Your own judgment can best determine when any practice which may be profitable here, will also be advisable in your situation; and for that purpose, it will be necessary for me to state concisely my view of the means by which lime acts, and the different effects produced, referring you for the reasons on which they rest to my essay in vol. 8. American Farmer.

The principal action of both sand and clay, is mechanical, and therefore large proportions are required to produce perceptible effects as manures. But from the presence or absence of a very small proportion of lime in soils, important results are produced, because in common cases, lime acts chemically, and not mechanically. Clay has but little power, and sand none, in holding vegetable or animal manures: but lime combines with them strongly, fixes them in the soil, and yields them solely to the growing crop. Hence, without lime, no soil can be long otherwise than barren. Though most soils are more or less deficient, none capable of supporting vegetation can be entirely destitute of lime in some form. This property of lime of combining with and fixing manures, may be advantageously used on every soil which nature has not made abundantly calcareous: but this benefit must necessarily be gradual, never quickly perceptible, nor can it be expected at all, unless on soils under meliorating culture, which will allow more to return to the earth, than is taken off.

The next most important effect of lime is that of neutralizing acids. Lime is never furnished by nature pure, as it attracts acids so strongly as always to be combined with some one or other—and most generally with carbonic, the weakest and most abundant of all, and with it forms *mild lime*, or *calcareous earth*. This acid is driven off by strong heat, leaving the lime then pure, (or caustic,) or it will readily yield its place to any stronger acid which may be brought in contact. Thus, if a bit of chalk or limestone be thrown into diluted *aqua fortis*, the strong acid seizes on the lime, the weaker escapes in air bubbles, and (if enough lime is used) the acidity and other qualities of the *aqua fortis* are entirely destroyed. Such a process takes place in most of our soils when lime is applied, and probably may in some of yours. Decaying vegetables or other causes, produce acids which either combine with lime and form useful manures, or if all the lime has been already taken up, poison both crop and land. The mark of an acid soil is a vigorous growth of pine, whortleberry or sheepsorrel. When enough lime (whether mild or caustic) is applied to a soil of this kind, the poisonous acid is destroyed, one cause of barrenness removed, and the first crop may be increased from 50 to even 200 per cent. before any other effect of lime comes into action.

There are several other minor benefits from lime, with a detail of which I shall not trouble you: for if my opinions are well founded, the two properties of fixing manures and neutralizing acids are sufficient to shew that lime (and nothing else but lime) will enable us to make durable and profitable improvements on such soils as are naturally poor.

Since the publication of my early experience of marl, (as we improperly call the bed of fossil shells,)

my opinion has suffered no change or abatement as to the value of that manure. I have extended the improvement over my farm as fast as possible, and generally with great benefit, though sometimes to loss. Not fearing any injury, I applied in most cases from 500 to 800 heaped bushels of shell marl per acre, about one third of which, on an average, was pure calcareous earth—and the crops of the present and preceding year have given proof that I was too lavish in the application. Several of my neighbours found equal injury from smaller dressings, but on land not secure from gauging, or more severely cropped than mine. Where equal quantities were put on, the injury on my land was in proportion to the poverty or sandiness of the soil, or the deficiency of vegetable matter: under opposite circumstances, no injury was produced even where 1000 to 1200 bushels had been laid on. The remedy for this error then is apparent—and where too much mild lime has been given, the soil is made more able to retain and profit by the vegetable matter which is then wanting. No soils have yet suffered in this way except such as were before *acid*, which induces the belief that the *salt of lime* (formed with the vegetable acid) causes this disease—and unless enough dead vegetable matter be present for this salt to act on, that it will injure the growing crop. Though I have lost some crop, and much labour by these heavy dressings, the result has not discouraged me: it only shews the manure to be much stronger than I thought, and that less will be sufficient to produce either benefit or injury. Candour requires the statement of loss from marling, which however could not have occurred either to my neighbours or myself, if the advice I formerly gave had been attended to, viz: to apply the manure in small quantities, and repeat it as might be found necessary, and not to use it at all, if exhausting cultivation was to be continued. No first crop after marling has suffered by this disease, (and its marks are too evident to be overlooked;) and when it has occurred in the second rotation, it never reduced the crop so low as the product of the land in its previous state. Another fact is worthy of observation: on spots where wheat of this and last year's crop was almost destroyed by overliming, clover stood and grew so well, that it promises to draw off the excess of the *salt of lime*, or otherwise to furnish enough vegetable matter to balance and cure the evil. Of this, however, my experience is as yet too limited to be considered as furnishing conclusive evidence.

When not diseased, the crops of the second rotation have been always good, and sometimes much better than the first crops after the fossil shells were applied. This increase was looked for and promised, before facts had proved this effect of lime. My later experiments with first dressings give results similar to those already published. But the most satisfactory proof I can offer you of the value of calcareous manures, is a statement of my crops of wheat, which having been generally my only article for sale, and always the most important, as much as possible was raised, and the average product may fairly be supposed to mark with tolerable accuracy the increase of fertility in the farm.

The last crop I expected would have been at least 2000 bushels, and that it fell short was entirely owing to the unexampled injury caused this season by rust. As it was, my loss was less than on any other farm in the lower country that I have heard of, as but few made half a crop, and many did not save enough for seed. This difference was mostly owing to the manure I had used, as lime hastens the ripening of all crops, and a few days difference in the ripening of a field of wheat may either cause its destruction by rust, or insure its safety.

None of my limed land brought wheat until 1820, and the following table shews that but little average increase of product had taken place before.

Years.	Acres.	Product.	Average.	
1813	145	810	5 $\frac{85}{145}$	Average per acre for 3 yrs. 61.3
1814	110	550	5	
1815	78	520	6 $\frac{58}{78}$	
1816	104	896	8 $\frac{61}{104}$	Average. 8
1817	79	595	7 $\frac{42}{79}$	
1818	63	450	7 $\frac{9}{63}$	
1819	132	1015	7 $\frac{91}{132}$	Average. 7 $\frac{1}{2}$
1820	119	1020	8 $\frac{88}{119}$	
1821	160	1049	6 $\frac{65}{160}$	
1822	154	1627	10 $\frac{84}{154}$	Average. 10 $\frac{1}{2}$
1823	139	1475	10 $\frac{85}{139}$	
1824	194	1850	9 $\frac{104}{194}$	
1825	195	1452	7 $\frac{87}{195}$	

Some of the after increase is certainly due to other kinds of improvement, but I have no doubt that full three-fourths of the whole was caused by the use of calcareous manures, on land rested two years in four, and not grazed. During the first six years, only about half my corn land was put in wheat, the other half being so poor that even our overseers admitted that seed would there be thrown away. You must observe, therefore, that it was the richest half of each shift that averaged from 5½ to 8 bushels. During the last term, all the land before left out, has been in wheat, which makes the increase of average product greater than would appear from the table. Even the highest rate of product above stated, may be thought contemptible by a farmer on your fine wheat lands; but through our poor and sandy country, the average does not exceed 5 bushels for the land actually put under wheat, and it would not be 3, if all the corn land was sowed. Yet the time will arrive, when by means of our calcareous manures, this now barren region, will shew fields the most highly improved above their natural state, and more profitable farming, than any portion of Virginia.

Your doubt whether lime will suit limestone soils, arises from the supposed similar constitution of soil and manure. I have not much personal knowledge of limestone lands, but have always supposed them, as you describe yours, "originally rich," and have attributed that richness to their being manured by nature with lime. It follows, from this supposition, that the value of lime as a manure will be lessened in proportion to the natural supply; that sometimes it may be useless or even hurtful, (as when the soil will effervesce with any strong acid,) and in no case can it be as beneficial as on our pine and whortleberry lands, which are entirely destitute of calcareous earth, and nearly so of lime in any other form. But it does not follow that lime may not be advantageously applied to most limestone soils, though to what extent and profit, experience can only shew; for it is a remarkable fact, that but few of those in this state contain any portion of calcareous earth, (carbonate of lime,) though they are evidently affected by the limestone with which they are mixed, or in contact with. To the question, what has become of the calcareous earth which the soil must have derived from the rock? I answer, that it still remains in the soil in another form: the lime being combined with the acid furnished by the decomposing vegetable matter, which being abundant enough to take up all the lime supplied by nature, shews that more might be beneficially applied. I cultivate more than 100 acres of land, naturally containing a slight mixture of shells, and which, in this respect, as well as in natural fertility, I suppose is nearly similar to your limestone soils; here the effect of calcareous manures, in the first crop, is scarcely perceptible, though I am confident in the benefit increas-

ing with time, and accordingly shall lime the remainder of this soil, as soon as I can finish what is less favoured by nature, and where greater improvement has been derived. But others have met with more pleasing results. Your friend Benj. Harrison, found great benefit from fossil shells, which he carried across the river from my shore, and applied to some acres of the naturally rich land at Berkeley. The extensive improvements made with oyster shell lime, by George E. Harrison, at Brandon, are mostly on land naturally rich, and not more destitute of lime than you will find most of your limestone soils.

When I speak of limestone soils, I mean to confine the term to such as are so intermixed with limestone, or lying so near it, that the soil must necessarily have been furnished with some of its component parts from the stone. If my theoretical opinions are correct, every such soil should be naturally rich, durable, and, when worn by cultivation, easy to restore by rest or manure, compared to poor natural soils. If you know any exceptions to this rule, if any real limestone soil is poor (without being made so by such evident causes as wetness, excess of rock, &c.) I would gladly be informed of the facts, as they would furnish the only known contradiction to the opinion before stated, that a proper proportion of calcareous earth will make all soils capable of becoming and continuing rich. But if Frederick is like Augusta and the adjoining counties which I have visited, you have soils enough, which, though (by courtesy) called limestone, are not better entitled to that name than the pine lands of the lower counties. By most persons, the term *limestone* is applied, not only to any land that shews a few detached masses of that rock, but also to wherever there are limestone springs, or under which a body of limestone lies, though forty feet beneath the surface. If the soil could be made calcareous by so distant a substratum, then the whole tide water district would be so, as a body of fossil shells lies under the whole extent, and generally much nearer the surface. Much of this land appeared to me very poor, and I think would be as much improved by lime as any of ours.

You ask, "to what crops, or in what mode, is lime most advantageously applied?" My fossil shells produce most immediate effect, when laid on the sod before ploughing, and corn, or some other horse-food crop, first raised, to mix the manure well with the soil. But when convenient, I prefer laying it on after ploughing, as it is better intermixed in the course of cultivation, and the danger of its being buried too deep is avoided. Caustic lime is usually applied to the surface of ploughed land, and slightly covered by repeated harrowings; and it is evident that this mode of covering must convert the quick to mild lime, before its solvent powers can reach the more deeply buried vegetable matter.

Until I began on cotton this year, I have made no field crops except corn and wheat, to which calcareous manures are equally beneficial. Clover is much more improved than either by lime; and without it, (applied by nature or art,) it is in vain to attempt raising clover to any extent, in this part of the state. Several years ago, I formed the opinion, that on land made calcareous, gypsum would act, though of no effect before; and though not confirmed, the opinion has gained strength from my experiments and observations, and however opposed some facts are, the greater weight of evidence is decidedly in its favour. The acidity of our soils, I think, will serve to account for the general want of effect from gypsum, and the supposed change of results after first applying lime; but it would be premature to offer the explanation of a fact which, however important it may be, is yet of doubtful existence. You are aware that gypsum has seldom any effect below the falls, and that most of the opposite results seen on the rich river lands, of all the most exposed to "self exhaustion," which can still

been supposed to cause this remarkable and general defect in our lands. You state the general objection to liming in Frederick to be, first, the belief that your soils are already sufficiently calcareous, and secondly, the cost of fuel. I have before offered you reasons for my belief that your soils generally are not even slightly calcareous, and on the most accurate examination, I do not think you will find a twentieth part of even your limestone soils to contain the smallest proportion of calcareous earth. The expense of burning I cannot estimate even on the practice of neighbouring farmers, of whom I have in vain made inquiries. But even if your fuel should be rather more dear than on James river, you would obtain the material for lime at far less cost. Oyster shells, taken from vessels off the landing places, cost 62½ cents per hoghead, (yielding 14 bushels of lime,) while you would quarry the rock on the farm, or perhaps the field, where the lime was to be spread. But I doubt whether burning will be necessary in every case where you may manure with lime; as its solvent power is seldom used or wanted, it will serve as well mild as caustic, if it can be broken down fine enough without heat. Limestone gravel is used to great profit in Ireland, and perhaps may be found in our limestone country; and from my own limited observation, I know that substitutes for it may be obtained in various places, if they should be found to suit as well in their quantity, as in their richness. With a view to answering your inquiries, I paid attention to mountains, and would have examined many supposed materials for manure, but for the want of the necessary tests; as it was, I brought home, and have analyzed, eight or ten specimens of rock, which from their softness and supposed abundance, seemed to promise calcareous manure of some value, without the cost of burning. Of these, one, frequently seen in the roads, is like limestone in colour, but more like slate in softness, and easily broken into thin layers, and what is exposed to the eye might be pounded to gravel without much labor. A specimen of this, taken about midway between Waynesborough and Staunton, contained 46.100 of calcareous earth; another, taken near Lexington, on the road to the Natural Bridge, contained 80.100. The stone which covers a considerable portion of the arsenal lot has 84.100, and though much harder than the others, is so soft as to be considered of no value for common purposes, and can be quarried and broken down with a pickaxe. A stone which is very abundant about the Salt Sulphur springs, is so hard, in the earth, as to yield only to the force of gunpowder, yet crumbles to small gravel after a few weeks' exposure to the air. This contains only 17.100, and is too poor to pay the expense of blasting, but would be worth using, if already exposed to the air. These specimens were selected almost by chance, and even if some judgment had been exercised, it would require many more examinations to prove the strength or worth of any large bodies of such substances; and they are mentioned only to shew that such manures may be found, and are worth your seeking. Another calcareous rock is found in limestone streams, which is richer than my best shell-marl, and nearly as soft. I mean that deposit of limestone water, to which the name of *marl* is as incorrectly applied in the upper country, as here to our fossil shells. This is nearly pure calcareous earth, and so far as its quantity will go, it must be a very cheap as well as rich manure. In these rocks I should expect to find resources for the improvement of land; but at the same time that I offer them to your notice, I am sensible that the very descriptions given, most probably shew how little I am acquainted with the substances recommended.

It may be objected that calcareous manures, the particles of which being as coarse as gravel and no very soft, would not be reduced in the soil, and would consequently remain nearly worthless. For

tainly the most minute division is best, and therefore 100 bushels of burnt lime, may be expected to exert as much power on the first crop, as 200 bushels in a coarser state; and it may be admitted further, that particles of lime stone, or shells, would for many years defy the decomposing powers of air, moisture and frost, which are commonly supposed the only agents for producing this effect. But however hard and insoluble these small fragments may seem, I believe a soil that requires lime, will completely dissolve all of moderate size in a few years. Such at least, is the invariable effect found, when a once acid soil is ploughed up for the second rotation, after applying the fossil shells, unless they were of the largest or hardest kinds, or the dressing unnecessarily heavy. Another fact will prove that this solvent action is peculiar to such soils as I have called acid. On our river lands, spots may be seen whitened with thin bits of muscle shells, which have been exposed at or near the surface for thousands of years, and to the action of the plough for the last century; yet muscle shells, which on those places appear so indestructible, are thinner, softer, and, from the animal matter they contain, more easy to crumble than the fossil sea shells which are used for manure. The acidity, or something equivalent to acidity, in the one soil, and the absence of it in the other, will serve to account for the very different effects produced.

Yours, &c.

E. RUFFIN.

[Winchester Rep.]

ON WHEAT, CORN AND COTTON.

MR. SKINNER, Williamsburg, Va., 1st May, 1826.

It is but recently that I have become acquainted with the "American Farmer," and no one delights more in his correspondences than I do, so far as I am able to see the end and aim of his labours. The subject of farming, more than politics, after the accomplishment of our national independence, engaged my youthful attention, as well from pleasure as from its being my only source of comfortable support. In common with the young men of those days, I had to lament very much the defect of education. Nor did the peculiar disorder of the times afford the means. I had casually read scraps of Duhamel and Tull, more particularly on lucerne; *Hari's* Husbandry, and several British publications; the only books, almost, to be found among gentlemen of those times. These gentlemen, also, imported farmers and gardeners; and in my boyish days, I had formed a taste for the scythe, as from its dexterous use on grass plats, &c. it displayed its charms. I had also seen one gentleman turning up his furrows with four horses to a wheel-plough, a postillion on the "near" leading horse, under the superintendence of an *English farmer*! I could detail many such facts, to the instruction and amusement of certain modern *illuminati*, whose vanity goes to the belief that good ploughing, good ploughs, &c. were never known before the Revolution, or, more particularly till since the late war! The *Blithe plough*, or the *swing-plough*, resembled very much the modern ploughs; and these, with some little modification, were what I commenced my career with. The plough adopted for my operations after a short time, was made by John and Abraham Singer, of Philadelphia; to this I had a wheel attached, because on level land and a free soil, I found that a youth was fully equal to a man for its government. I embraced, with very distinguishable zeal, the mould-board of our much esteemed and venerated Virginian; and had the honour of making, I believe, the first attempt to its introduction. This, however, like many other ingenious theories, did not so well answer in practice. But it answered its purpose very well, after some practical modifications.

The termination of the campaign of 1781, requiring some more rational avocations than fox-hunting,

and a free indulgence of the *Old Dominion spirit* of indiscriminate hospitality. I had received possession of a small piece of exhausted land and a few negroes, previous to the invasion of Lord Cornwallis. These slaves all deserted, nor could preparations be made for farming till after the fall of York Town, when some few of the slaves were recovered—and here you will pardon a digression. During the descent of the British army from the upper to the lower country on James river, a trait of the negro slave character occurred: those masters who were notorious for cruelty, lost none of their slaves; and, *vice versa*!

Among my first essays, a given quantity of poorer land actually produced more than a greater quantity and better quality; both pieces in equal tith! and this fact was ascertained to have resulted from a more accurate distribution, and greater quantity of seed-wheat. Deeming it improper to impose on you farther details as to the wheat crop, I will pass on to Indian corn. "A Talbot Farmer," in No. 5, vol. 8, on "planting corn," awakens some interest on the subject. Every day gives me new delight by communications of the improvements in the arts and sciences. It was my early practice to plant corn deep. My mode was to place the crop in *four-fold order*—never in drills. The intersection of single furrows afforded the deep deposit for the seed, which, when carefully covered, left it "never less" than two inches deep. But the Talbot Farmer has given me great satisfaction, by his reason for planting "late in March or early in April." My plan left two stalks in the hill or check, generally; and when well manured, three, and sometimes four. The several operations were thus: as soon as the plants were sufficiently up and thinned, a small plough with mould board turned the furrow from the plants both ways; the cross operation was always regarded as necessary; the hoes now following, cleared away weeds, grass, &c. After which, the same plough, by reversing its effect, laid the furrow-slice to the plants; and by repetitions, according to circumstances, finished the culture without farther occasion for the hoe. By this mode, it will be perceived, that there was no hill raised, (as is now the ruinous practice in lower Virginia,) as was then practised by one of my neighbours on a *stiff clay*. From this error he was cured by a tremendous gust, which, in the most luxuriant growth of his plants, broke them off; whilst mine were prostrated, and rose again!

In recommencing my agricultural labours, about 12 months ago, I found the cotton-mania had become contagious. Notwithstanding our wants during the revolutionary war had taught every negro how to raise cotton, (upon the land before described, in 1781, an immense crop of this plant had been raised,) I have perused a vast number of communications upon the subject, and conversed with many. Nevertheless I can discover nothing very important in the great variety of theories, or practices, of modern date. The most material seems to be, to avoid every kind of operation, either whilst the *deves* might be disturbed, or when the plants were wet by rain, or the ground not sufficiently dry. This latter secret I should not have required, because I hold it as an axiom that, when wet, no lands should be stirred. The maxim, moreover, "if a thing is worth doing at all, it is worth doing well," has never been disregarded; and to the cotton crop, may apply with peculiar propriety. An attempt at a small crop of cotton last year, was completely frustrated by the gust in June. I had then resolved upon the *modus operandi*; and in spite of new notions, finding many conflicting opinions, I am now proceeding, not a little excited by the good sense and practice of the Talbot Farmer, confirmed too, in my method, by coincident considerations. My present order of planting is, both corn and cotton, to check off the ground 34 feet by 54 feet; and, by comparison, the

order corresponds, to a small fraction, with the Talbot Farmer. One stock of corn; and two of cotton, intended as the most promising. I had prepared two fields for the two crops, last fall and winter; and having since seen that Mr. Buel's land resembles my own, and influenced by his pertinent remarks, my present ploughing is *superficial*, and the subsequent harrowing will leave a shallow tilth for the cotton crop. I very much regret that I had not known the Talbot Farmer early in March last; my corn-land was at that time ready, and his doctrines should have received the profound respect of

Your

FRIEND.

NEW NAMES FOR OLD THINGS.

SIR,

Virginia, June, 1826.

In the last Farmer, No. 13, sheep "of the IMPROVED BAKEWELL AND Dishley breed" are offered for sale, and of these animals it is said "the mutton is very fine and pretty large, but not so large as the Dishley alone," which is considered an improvement upon that breed.

If there be such a breed as the "improved" Bakewell, it is to be found by that name only I apprehend in America.

Bakewell, it is well known, was the great improver of Leicester sheep, which obtained the name of *New Leicesters* from his improvement. His farm was called *Dishley*—thus his sheep were sometimes called *Dishley* after it, and sometimes *Bakewell* after him.

If the sheep advertised, and for which reference is to be made to you, be a new family, called *improved Bakewell and Dishley*, it would be well to trace its origin.

ALBION.

MASSACHUSETTS AGRICULTURAL SOCIETY.

At the annual meeting of the Massachusetts Society for promoting Agriculture, held at the hall of the Massachusetts Bank, on Wednesday, the 14th inst., the following gentlemen were chosen officers of the Society for the year ensuing:

HON. JOHN LOWELL, President.

His hon. THO'S L. WINTHROP, Vice President.

HON. ISRAEL THORNDIKE, 2d Vice President.

JOHN PRINCE, Esq. Treasurer.

HON. RICHARD SULLIVAN, Cor. Secretary.

GORHAM PARSONS, Esq. Record'g Secretary.

BENJAMIN GUILD, Esq. Assist. Rec. Secretary.

Aaron Dexter, Esq.

Hon. Peter C Brooks,

Hon. William Prescott,

Hon. John Welles,

E. Hersey Derby, Esq.

Jonathan Amory, Esq.

Trustees.

HORTICULTURE.

[FROM THE NEW-ENGLAND FARMER.]

ON THE DURABILITY OF FRUITS.

Concluded from page 95.)

The Essex Register-writer proceeds, "We have not yet given quite all of Mr Knight's hypothesis;" and introduces him as saying: "No new life is here generated, and the graft, the layer, and the cutting, appear to possess the youth and vigor, or age and debility of the plant of which they have formed a part."—Here the Essex Register-writer remarks, "It is only necessary to state this proposition for its own refutation; for mulberries, currants and gooseberries, have been propagated in France, England and the United States, by this method; and yet, who ever was able to show, that such has been the result, as the hypothesis requires? Nay, these plants, as well as the apple and pear, have been propagated by cuttings and graftings.

ever since the time of the Romans; and who ever observed that they suddenly every where decayed? currants and gooseberries are not long lived plants, and yet we go on propagating them from cuttings to all appearance *ad infinitum*."

These remarks of the Essex Register-writer, are made with an air of triumph, for an *imaginary* victory, over a man of an enlightened mind, an assiduous student of nature, an eminent philosopher, and of larger and longer experience in the subject under discussion, than probably any man now living!

But to be entitled to a *real* triumph, the Essex Register-writer is wanting in one important fact. Trees, shrubs, bushes, and the vine bearing fruits, have doubtless been propagated by cuttings and graftings, from the time of the Romans, and probably for a period long anterior to them. But to avail himself of this fact as an argument against Mr. Knight's theory, the Essex Register-writer should show that the same plants had never, in all that time, been propagated by *seed*, and by that means been renewed; or that other *varieties* of the same species of fruits, of equal or superior qualities, had not been obtained to supply the places of such as were worn out with age. But of this essential requisite neither he nor any other person can produce any proof. On the contrary, it is most probable, that in all ages, fruits, in all the varieties which have been subjects of cultivation, have sprung from *seeds*; and have endured, according to their several native constitutions, different lengths of time; and on their failures from age, valuable kinds, springing from seeds of young and healthy stocks, have supplied their places. In every part of our own country, some new varieties of apples, in high estimation, have appeared, manifestly springing from seeds; for they are not traced to any other source. Among these, may be mentioned, the Newton pippin, first discovered in a single tree in Newton, on Long Island;—the Spitzenburgh, formerly called the *Esopus* Spitzenburgh, where it was said to have originated. These two varieties, growing in the state of New York, were, I well remember, in great perfection, in the time of the revolutionary war; but the latter, and another excellent apple called the *swaar*, are now stated by a writer in the New England Farmer, of the 17th of March, under the signature of Rusticus, (who I am assured is Jesse Buel, Esq. of Albany, a distinguished agriculturalist) as "having evidently passed their prime, and the fruit and wood, propagated by buds and grafts, are more diseased than formerly." In my former communication, I mentioned the pearmain, once so celebrated, and 50 or 60 years ago, decidedly our best apple, much superior to what the Baldwin is now, as having *run out*; and in confirmation of my own statement of its being unproductive, gave the information received from a farmer in Danvers. I have since seen his son who inherits the same farm; and he says the same pearmain trees continue unproductive, and are really of no value, except as wood for fuel.

In Massachusetts several new and valuable varieties of apples have appeared, which evidently sprung from seeds. The Baldwin or woodpecker apple is one of them. In Wenham is an excellent fall apple, large, rich, and a constant bearer. I have seen it no where else. It goes there by the name of *Kilham hill*, from the name I suppose, of the original owner, on whose hill it was discovered. Probably there are few large farms in the state, in which new and valuable varieties may not be found. Look into any American catalogue of apple trees, and there will be seen a variety of apples, whose real names indicate their American origin, and whose good qualities have recommended their cultivation. Hence we need not repine at the extinction of old favourites, seeing others as good, or better may be obtained from seeds, in all future time.

The Essex Register-writer hints at Hammer-

Smith's practice of propagating mulberries, gooseberries and currants, being by cuttings, that therefore, they may be so continued, and in perfection, forever. Forsyth remarks, that these three fruits are propagated by *seeds* or cuttings. In my first communication to you on this subject, I mentioned the improvements in the propagation of gooseberries, in Lancashire, (which I observe was printed Lincolnshire,) in England from the *seeds*. And from the estimation in which these varieties are held, it is probable that few of the old sorts remain. The same process with currants, has doubtless produced the large red and white Dutch currants, which a few years since were introduced from England, and which are so vastly superior to those before in the country. Forsyth advises the culture of young plants raised from the seed, in order to obtain some fine varieties. And there can be no reasonable doubt, but that in all ages, fruit bearing trees, and plants of all kinds, have been raised from seeds purposely sown, or which had fallen from ripe fruits.

The Essex Register-writer, in his third publication, affects to sneer at Mr. Knight, and at all who adopt and support his theory. But either he does not yet understand that theory, or wilfully perverts it, and mistakes his facts. It was in this third piece, that the writer promised "to bring forward such proofs, as shall to an unprejudiced mind, totally destroy all credit in so strange a notion as Mr. Knight has advanced."—I have looked for these overwhelming proofs—but do not find them. His first authority is that of a "Mr. Henry Phillips," who having F. H. S. added to his name, may be a *fellow* of the Horticultural Society of London, of which Mr. Knight is the president. The first quotation from Phillips, is as follows: "For some years past, it has been stated by several ingenious writers, that many of our best varieties of apples, could no longer be cultivated with success; that by length of time they have become degenerated, and worn out. Mr. Knight the president of the Horticultural Society, seems to have been the first who gave birth to this idea." So it appears that Mr. Knight does not stand alone, in maintaining his theory. And to overthrow it, Phillips says—"Having observed in Covent Garden market, in 1819, a great quantity of the real golden pippin, in a perfect state, the author was induced to make particular inquiries respecting this fruit, and has received satisfactory accounts from all quarters, that these trees are fast recovering from a disease or canker, which appears to have been brought on by a succession of unpropitious seasons; but that the summers of 1818, and the following year, have greatly improved them." A notable proof this of the falseness of Knight's theory, a theory founded on *facts*, the result of many years of careful observation, and of numerous experiments made with distinguished skill, by an eminent naturalist, agriculturalist, and horticulturalist, anxiously trying every method which ingenuity could devise, to discover the means of renewing and continuing the old celebrated apple trees, in a productive state; but in which he totally failed: excepting when he *changed their climate*; for he had before observed, "that [not the golden pippin only, but] *all the old fruits* were free from disease when trained against a south wall." But Mr. Knight's great object, in his experiments, was, not to provide the luxury of the fruits for the wealthy, but *standard trees for the farmer's orchard*; and here he found all his patient labours were fruitless. Mr. Knight's established character is enough to repel the hearsay evidence of Mr. Phillips, with his news "from all quarters." And "the real golden pippins" which he saw in Covent Garden market, were probably raised against south walls—the very position in which Mr. Knight says he also succeeded.*

* It is the expensive mode of raising fruits in the cool climate of England to place them against the south wall.

Mr. Phillips' next proof is this. "He waited on some gentlemen who are well known in all parts of the world for their practical knowledge in the cultivation of apples. Mr. Hugh Ronalds, Jun. of Brentford informed him, that he had lately seen a tree [one tree! and this not a golden pippin, but only] of the golden pippin kind, which had been *planted against a wall, in a south aspect, which was in a thriving condition, and the fruit in a perfect state*." But, this, again, if a genuine golden pippin, merely corresponds with Mr. Knight's own experiment.

Mr. Phillips' third proof: "Mr. Lee, of Hammer-smith, who showed me five hundred various kinds of apples, was *decidedly of opinion* that the apparent decay of some trees, was owing to the unfavourable springs we have had for several years." But if the "unfavourable springs" caused the decay in question, why did they not produce the same effect on all his 500 varieties, as well as on some (meaning the old fruits) whose decay had for years been apparent? Besides, this is merely the *opinion* of Lee, a nurseryman who with his brethren of the craft, wished still to find a market for their golden pippin trees, and other old fruits.

Phillips' fourth proof. "Mr. Knight, of King's road, Chelsea, has also favoured us with his *opinion*, which perfectly agrees with that of Mr. Ronalds and Mr. Lee."

Phillips' fifth proof. "We are informed by Thomas Harrison, Esq. who resided several years in Madeira, that there are at this time, a considerable number of the true golden pippin trees, growing on the mountains of Madeira, about fourteen miles from the capital of that island, which regularly produce abundance of fruit." He adds, that grafts sent to England about three years before he wrote his book produced fruit the second year, "and proved to be the *original* golden pippin."—He says further—"These trees are also in a thriving state in several parts of America, as has been shown by the excellent quality of fruit lately sent to this country [England.] He also observed them in several parts of England in the summer of 1821, in as healthy a state as most other apple trees.—But all these, like the two cases he specified, were, doubtless, trained against south walls. I have no reason to believe, that any *golden pippins* were ever sent from America to England. I never heard the name mentioned among farmers in the middle or northern states. I much doubt whether there are twenty golden pippin trees in the United States; except in the gardens, or well sheltered grounds, of a few gentlemen, who spare no expence in the cultivation of fruits. Besides, the few specimens of golden pippins which I have tasted, were all *sub acid*: whereas, Forsyth, describing the true English golden pippin, says, "its juice is *very sweet*." Excellent apples have indeed been sent from America to England—particularly the *Newton pippin*; which in my estimation, has no equal in the United States. That is, the *genuine* Newton pippin: for I have seen some varieties called by that name, which had no claim to superiority.

Such are the proofs furnished by Mr. Phillips, which are to overwhelm Mr. Knight, and the several "ingenious English writers" who agree with him. With regard to the Madeira golden pippin, if really of the same quality with that of England, it does not follow that it was the original golden pippin, carried from the latter country to Madeira, (for England claims to be the native country of the golden pippin:) on the contrary, it is, probably, like the *one* tree mentioned by Ronalds, "of the golden pippin kind"—so much like the old golden pippin as to receive the same name; although it

that cause their high prices. In the same Covent Garden market, there are apples, whose average prices, from November to March, are from thirty to forty-eight shillings sterling (from six to ten dollars) a bushel. It is stated in London's Encyclopedia of Gardening

may be a new fruit sprung from a seed. And among the infinite number of varieties of apples growing from the seeds, it would be extraordinary if no two should so far resemble each other, as to be called by the same name.

The next proof is taken from Mr. Coxe's book on fruit trees, printed in 1817. Referring to the doctrine in question, Mr. Coxe says—"Writers of the highest reputation concur in the opinion, that the existence of every variety is limited to a certain period; no kind of apple now cultivated, is supposed to be more than 200 years old. This term does not exceed the age of a healthy tree. The stire apple of Hereford in England, is supposed to have long passed the zenith of its perfection, and to be rapidly declining there; yet in the growth and vigour of at least one hundred trees, planted in my orchards, there appears to be no deficiency: on the contrary, they attract the notice of all who see them, for the extraordinary luxuriance, as well as the beauty of their growth. The soil is a light but rich sandy loam, such as the English writers describe as best adapted to the cultivation of this apple."

This statement by Mr. Coxe I have no doubt is correct; but it is not adverse to Mr. Knight's theory. Apple trees which in Herefordshire in England, in 52 degrees of latitude, were approaching the state of decrepitude from old age, and could no longer be cultivated in their orchards with success, might live and thrive for a number of years, when transferred to Burlington, in New Jersey, *twelve degrees further south*, and planted in the warm sandy loam of Mr. Coxe's farm, (such as he describes it, and such as it appeared to me when I formerly walked with him in his orchards,) there enjoying the "glorious hot sun" of the fortieth degree of latitude. The change must be equivalent to the removal of the same fruit trees from the open orchards of Herefordshire, to the south wall of Mr. Knight's garden in the neighbourhood. The insular situation of England, exempts it from the severe frosts of our winter; but the want of the heat of our summer suns, obliges them to resort, at vast expense, to artificial means to ripen delicate fruits. Peaches and nectarines, for instance, besides raising them against a south wall, (thus facing the sun at noon-day,) they find it necessary, about the time the fruit is ripened, to "thin away the leaves;" clipping off, at first, the half of each leaf with scissors, and about a fortnight afterwards, the other half, to let the sun shine upon the limbs and buds; without which the fruit buds would not be so matured as to be productive the year following.* Every New England farmer will understand the nature of the English climate, when informed that the sun's heat is not sufficient to ripen Indian corn. But their winters are so mild, as to admit of their ploughing their fields, at times, in every winter month. And the "long, though cool and shadowy summers of England,"—the growing season, in spring, summer, and autumn,—usually bring their small grains, wheat, rye, barley and oats to maturity; and from their superior culture, in abundant crops, much surpassing the general products of the same grains in the United States.

The last witness produced by the Essex Register-writer, is a Mr. George Bliss, who, having had tens of thousands continually under his care, professes to be thoroughly acquainted with the constitution of the apple tree. "He is confident that it is nothing but bad management and ill treatment, which is the cause of the general decay of their apple trees (in England,) and principally from want of proper attention to the canker." And he says—"this is quite evident, from all the new sorts becoming affected by it as well as the golden pippin."—This Mr. Bliss,

from the vast number of trees under his care, must be a nurseryman, and like his brethren of the same craft, interested to make their countrymen believe in the practicability of continuing in a productive state, the old favourite fruits, which they continue in their nurseries. He however admits, just what Mr. Knight asserts, "the early decay of the golden pippin"—when young trees are grafted with it; and that "it is entirely owing to the canker;" and Mr. Knight says it is their most fatal disease. And what is this nurseryman's remedy? "Keep the body of the tree sound, and you may depend on your golden pippins flourishing as well as ever." As if he had said—keep your tree from sickness and decay, and it will not be sick nor decay.

But Mr. Bliss says the decay of their apple trees in England, is owing to bad management; and after him, the Essex Register-writer says the same thing;—bad pruning—suffering the grass to grow about them, &c. &c. But was the management better fifty and a hundred years ago, when the good old fruit flourished, than since the establishment of agricultural societies all over England, and the general spirit of improvement has been pervading every department of the farmer and gardener?—Incredible! Besides, when Marshall wrote, apples abounded in the cider counties in England—not of the far famed favourite sorts of old times—for they were "run or fast running out"—but of the other varieties sprung from seeds; which once in two or three years, when there was a "hit," so loaded the trees that the farmers with difficulty could find casks enough to hold the liquor. Yet, says Marshall, who wrote what he beheld, "It is no uncommon sight, to see trees in this district [Herefordshire,] with two or three tiers of boughs pressing down hard one upon another; with their twigs so intimately interwoven, that even when the leaves are off, a small bird can scarcely creep in among them." Nevertheless, Marshall says—"It would be difficult to describe the burden, which many trees, this year [1788] had to bear. Notwithstanding the trees were as full of wood as neglect could fill them, every twig, within and without, was loaded with fruit. Of trees of luxuriant growth, the most upright shoots, even to the summit, were rendered pendent with the weight of their produce, hanging down on every side like strings of onions; the fruit appearing to the distant eye, to cover the entire surface of the tree."

I have already said much more on this subject than many readers, perhaps, may think necessary; but the captious remarks of the Essex Register-writer, were uttered with such imposing confidence, that a full examination of them appeared to be expedient.—This writer fancies that the common mode of propagating gooseberries and currants by cuttings for ages, even from the time of the Romans, as decisive proof that Mr. Knight's theory is unfounded. But besides that, to give any force to this as an argument, it behooves the writer to prove (which is not only improbable, but impossible) that those plants have never been propagated by seed—every person who has seen a currant or a gooseberry bush, knows that they continue themselves by annually sending up from their roots *new shoots* (according to Mr. Knight's doctrine of the longevity of roots) to supply the places of their predecessors, debilitated by the bearing of a few years; and the latter should be cut away, to make room for the former. And this suggests a reason for suffering them to grow in *bushes*, instead of training them with single stems, as *trees*. Advert, farther,

* Marshall, in 1788, said, that in Gloucestershire, the soil of orchards was generally in grass: and that the farmers, in planting their trees, carefully replaced the sods on the surface, that no grazing ground might be left. In Herefordshire, the soil of orchards was generally under tillage.

to the raspberry. The shoot of this year from the root bear fruit the next,—and then absolutely die. Yet the original root and the young shoots from its running branches, will continue the plant, perhaps for a century. It may nevertheless be expedient, whether to continue the plant in existence, or to obtain superior fruit, to raise new plants from the seed; as is the practice of gardeners with currants and gooseberries. It is to the vain attempt to perpetuate varieties of the apple and pear, from grafts and their branches worn out by age and bearing, that Mr. Knight's doctrine applies. And it is by cutting out the branches of wall fruits, after a few years bearing, that the English gardeners are able to present good fruits to their employers. No one would commit the folly of attempting to propagate the raspberry, by setting in the ground the shoot which had once borne fruit; and it must be comparatively foolish, to expect to continue forever the varieties of the apple and pear from grafts and their branches, not indeed absolutely dead, like the raspberry, but in a state of *decrepitude*, tending to dissolution, and incapable, in the meantime, of producing any fruit, or but a little, and that of an ordinary kind.

Mr. Knight's doctrine was founded on *facts*, and could not therefore be overthrown. The individual instances mentioned in opposition, are only *exceptions* to the *general principle*, and correspond with his own admission and actual experiments. He had even anticipated the case of Mr. Coxe's stire apple; when he says—"It appears also probable that the latter period of the existence of the apple tree would be considerably prolonged in a *southern climate*." I have eaten very fine Newton pippins which grew in Maryland near the bank of the Potomack; and I have supposed that they, with other apples originating in the north, might continue to flourish in Maryland, Virginia, and the hilly parts of the Carolinas, long after the originals had perished in their native climates. At the same time, I have not imagined, that in the most genial climes they would last forever; adopting the sentiment so elegantly expressed by Mr. Knight, that "Vegetable, like animal life, in individuals, appears to have its limits fixed by nature; and that immortality has alike been denied to the oak and to the mushroom—to the being of a few days, and of as many centuries."

T. PICKERING.

LADIES' DEPARTMENT.

NUTRITION—FOOD.

(Continued from page 100.)

An essential difference has place in the qualities of curd when it results from the milk's spontaneous separation, and when produced by the action of coagulating substances. From its possessing slight ascendancy, the former kind may be regarded as conducing in some degree to facilitate the progress of digestion.

Curd is made, as every person knows, by a great diversity of modes, into cheese:—that prepared from milk previously deprived of its cream, contains very nutritious matter, but is difficult of digestion:—when made of entire milk it forms a still more nourishing substance:—cheese made of pure milk with a portion of other milk added to it, has its nutritive qualities thereby increased, and is made easy of digestion by the oily particles interposed between its parts, rendering their adhesion less firm:—and that, whose curd has been taken from cream alone, is in all respects preferable to the other kinds. When much of its oily substance is dissipated by toasting, it is made to an equal extent, less easy of digestion.—Curd retaining a portion of its whey may be sparingly exhibited to infants; but their digestive organs are imperfectly adapted to the right assimilation of cheese.

* Treatise on the Culture and Management of Fruit Trees, by Charles Harrison, F. H. S. a new work, printed in 1823.

Butter is obtained, by a well known process, from cream, or from milk in an entire state before its cream has been spontaneously disengaged. When thoroughly kneaded and washed, it has sometimes a white, generally a faint yellow tinge, which is often deepened by artificial colourings. It obtains great modifications, in its consistence, taste, flavour, and appearance, from the manner of preparing it in different countries, from the seasons, the breed of cows yielding the milk, and from the substances on which they are fed. Whatever be the varieties, however, which it presents,—and these are appreciable by the senses only,—it always exhibits, when fresh, the same chemical characters.

Chemists describe the constituent parts of butter to be,—a fatty substance, a peculiar fluid oil combined with varying proportions of butyric acid, about a sixth part of whey, and a minute trace of colouring matter, whose exact nature has not yet been ascertained. Although this whey be always whitish, it includes a very small proportion only of curd:—its milky appearance seems to depend on a kind of emulsion formed by its combination with the fluid oil of the butter. Butyric acid, which exists in whey even after it has undergone distillation, enters in considerable proportion into the composition of butter. Neither this substance, however, nor the fluid oil it comprises, is particularly acid; but they contain all the elements of the butyric, which forms as readily in them as the acetic acid does in milk.

Butter forms a very nutritive article of food, and may sometimes be advantageously used by persons, in whom milk itself occasions prejudicial effects. Like almost all the other fatty substances, it has been regarded as having a tendency to determine an excess of the biliary secretion. In many parts of the world, however, the inhabitants subsist chiefly on butter: nevertheless these people are not peculiarly exposed to suffer from bilious complaints: many persons in our own country, also, take it habitually and freely, without experiencing any inconvenience from its effects. It is, therefore, probable that butter does not increase the quantity of bile, but rather requires an intermixture of this fluid, for the purpose of promoting its being assimilated by the digestive organs.

This view of the properties of butter receives confirmation from experience:—butter, therefore, is contra-indicated in diseases of the liver, wherein the secretion of bile is defective or altogether suspended; because, for want of bile, the butter becomes absolutely indigestible. Convalescents, in like manner, should abstain from using it; and, also, children predisposed to obstructions of the lymphatic circulation. In them, it tends to produce inactivity and torpidness of the bowels, with which an injurious looseness frequently alternates. Persons, too, who are afflicted with paroxysms of heart burn, have it aggravated by giving butter a place in their diet. Respectively, however, to all these circumstances, it is essentially necessary that distinction be made between the different states of that substance. When fresh, or recently salted, it furnishes much nutritive matter; and, in general, is very easy of digestion. If melted with a gentle heat and poured over vegetables, it promotes their digestibility, and renders them more nourishing:—but, if it has become rancid or been slightly burned, as in stewed or fried meats, it is then deprived of nearly all its nutritious qualities, and proves injurious to those individuals in whom the powers of digestion are constitutionally or morbidly feeble.

Butter, made from milk of sheep and goats, although much less employed, has nevertheless many properties analogous to that of the cow. Sheep's milk yields it in considerable quantity:—it has a pale yellow colour, is moderately firm, melts easily in the mouth, and leaves on the palate an oily im-

and frequent washings, it soon becomes rancid.—This kind of butter forms a chief ingredient in the Rocheford cheese, which is held in high estimation for its excellence.

Milk of goats yields, in proportion, more butter than that of the sheep:—it is, at all seasons, white as suet and remarkably firm;—yet, notwithstanding this whiteness, it does not include any cheesy particle;—a circumstance which may be ascertained, by reducing a portion of it to a fluid state.

Cow's milk, however agreeable to the taste, has very often a slight degree of acidity, even at the very time it issues from the teat. This circumstance has place, although the animal be quite healthy and feed on salubrious herbage:—it may easily be ascertained by dipping into new drawn milk, a piece of litmus or blotting paper, which instantly has its purple more or less brightened into scarlet colour. What produces this change is, by some, considered as a minute proportion of the acetic, by others, of the oxalic acid.

When cow's milk stands at rest, in a temperature between 50 and 55° of Fahrenheit's thermometer, it separates sooner or later into three parts,—the cream on its surface,—the cheesy substance which coagulates underneath the preceding,—and the serum or whey whereon floats a kind of clot formed out of the cream and curd. If it be placed in a temperature either too high or too elevated, the formation and spontaneous separation of the cream is thereby proportionably injured. Contact with the external air does not appear to be necessary to the milk giving out its cream:—this process advances even in vessels accurately closed and full to their corks, and also in vases replete with carbonic acid gas:—and, it may be retarded for several months by bringing the milk every day to a moderate heat.

If milk be left unagitated for some time after its first natural separation into three parts, the cream acquires a darker colour, becomes sour, gets covered with mouldiness, grows bitter, blackens, and putrefies:—the whey, in which the cheesy matter is floating, acquires an acid taste:—last of all, the cheesy matter itself begins putrefying like the cream and gives origin to a new acid, analogous to that which accompanies the spontaneous decomposition of all animal substances. On the other hand, if milk be prevented by frequent agitation from passing into these changes, it undergoes a vinous fermentation* and a liquor is thereby produced in about twenty days, having a slight degree of acid, and yielding alcoholic spirit by distillation.—Buttermilk, when recently made from uncreamed milk, is known to comprehend properties almost identical with those of fresh milk from which the cream has been separated:—it is, therefore, applicable to similar uses, and may contribute, with nearly the same advantage, to the general purposes of alimentation.

(To be continued.)

* Koumiss, the favourite beverage of the Tartars, is a fermented or vinous liquor, prepared from the milk of mares. These wanderers make it in large quantities at a time, and promote its chemical changes by frequent agitation. To the proportion of milk, they add, as a ferment, a sixth part of water, and an eighth of the sourest milk of cows they can obtain, or a smaller portion of old koumiss:—the vessel is then covered with a thick cloth, and allowed to stand in a warm place for twenty-four hours, when the liquor is well beaten with a stick, for the purpose of mixing its thicker and thinner parts which have separated:—it is now placed, for another twenty-four hours, in a high narrow vessel, and the beating repeated till the liquor has become quite homogeneous.—This liquor will keep, for some months, in a close vessel and cold situation; but must be well mixed by beating or shaking, every time it is used. A spirit is sometimes extracted from it by distillation. The Arabs make their *leben*, and the Turks their *yourt*, in the same manner. When properly prepared, it may be kept to stand till it becomes quite dry; and, in this state, it preserves its fragrance in bags and vessels of water.

SPORTING OLIO.



INSTRUCTIONS FOR TRAINING—BY CHAS. DUVAL, GIVEN IN OCT. 1797.

[We are resolved to persevere until some of the obstructions are removed which have heretofore prevented the farmers of Maryland from paying greater attention to the qualities of the horses bred by themselves—and more especially to the propagation of the blooded horse. One difficulty which has stood in the way of the preference which should ever be given to horses of high blood, has consisted in the ignorance of the art of training; and an impression that to prepare a horse to test his powers by trial on the turf, involved some great mystery, known only to the initiated, requiring as much study and expense as for a learned profession. As the most obvious means of imparting plain instruction on this point, we have obtained for publication the following transcript of rules furnished and followed by the late Charles Duvall, well known on the turf as a skilful trainer and honourable sportsman. It is the only system we could procure; and if experience of subsequent date has detected any errors in the plan pursued at that time, we shall be much obliged to any gentleman who will point them out, with any improvement in the art of training adopted since that period.—EDIT. AM. FARM.]

Let the horse be in good flesh when you put him up; night and morning walk him four miles, well clothed with one blanket and a suit of horse clothes, for eight days; water him between the walking with forty swallows; feed him at 9 in the morning, at 12 o'clock, at 6 in the evening, and at 9 at night, with three quarts of oats and chopped corn, one-fifth chopped corn, giving him one bundle of blades after feeding in the morning, at 12 o'clock, and at 6 o'clock; after feeding at 9 at night, give him two bundles of blades. Let him be well rubbed before each feed, with straw as to his body, and his legs with woollen rubbers; let him have a good bed of straw; let his feet and legs, night and morning, before you take him in, be washed with warm water and Castile soap—then for eight days more, in the morning, gallop two miles before watering, and one mile after, and in the evening one mile before watering and one mile after; clothing and rubbing before each feed, as before. After that prepare him for sweating, by feeding with two quarts at 6 o'clock, and at 9 o'clock the same, giving him no blades and having him well muzzled; let him be well rubbed, and have a good bed of straw, always keeping his feet stuffed with cow dung. Let your turf be kept well harrowed and soft. At day break take him to his training ground, with three, four or five blankets, and his body clothes; let him go four miles, the first three half speed, the fourth mile at a sweeping rate with a taught rein, and a ride not exceeding the weight the horse should carry. Then strip him on the field, carefully scraping, rubbing and brushing him till dry; then put on his usual clothes and walk him an hour; then take him to the stable; then scald a gallon of bran, add cold water to it till milk warm, and let him drink what he will of it. Then let him be well rubbed and dressed; then scald two quarts of bran and two quarts of oats, mix them, putting among them a table spoonful of the flour of sulphur and as much antimony as will lay on a cent—and let the horse eat it warm; then take two bundles of stemmed blades and sprinkle them with salt and water, and

and woollen rubbers; then leave him till 12 o'clock; then feed as usual with three quarts at 12; at 4 in the evening brush him, and let him walk an hour; then water him with water aired, or branch water; then walk him a quarter of an hour; take him in and have him well cleaned and rubbed; then feed at 6 and 9, with three quarts of grain; then muzzle him. In the morning after his sweat take him to the ground and strip him as for a race; then run him two miles with a tight rein, and continue him two miles more in a loose; then clean him and rub him dry; clothe him and walk him till cool; then take him in, wash his feet and rub them dry, cleaning him, rubbing him, stuffing his feet, and feeding as usual—so continue to gallop every night and morning as before directed, to wit: in the morning first gallop two miles, second gallop one mile; and in the evening one mile each gallop; sweat every eight days. Train your colts in martingales; bleed after the first sweat, and, if necessary, after the second sweat. Those are the rules I observe in training.

CHARLES DUVAL.

From which, the rules observed by Mr. Thomas Larkin, of Virginia, varied in these particulars: he feeds in the morning with four quarts, at 12 with two quarts, and at night with four quarts—same blades as Mr. Duvall. Morning, gallops 1st, two miles and a half; 2d, two miles. Evening, gallops, 1st, two miles; 2d, one mile and an half. Sweats five miles, and brushes his horse before he takes him in; after cleaning and rubbing, and drying him, two miles. He washes with cold water, except when he sweats his horse, and waters after the horse comes in and is clean, just before feeding, 40 swallows in morning and evening, and twelve swallows at 12 o'clock; mixes a spoonful of sulphur in the mash, after sweating, but no antimony; walks before galloping two miles; between the gallops, one mile.

Mr. Duvall, in October, 1797, gave me the foregoing rules. Mr. Larkin trained for me two years. And as a sportsman, that all horses may run in the best order, and that their *superiority of foot and bottom* alone may entitle them to the palm, I with pleasure comply with your request, that through your inestimable paper, all excuses by gentlemen having fine horses, as to the mode of training them, may be removed—and the friends of the turf gratified with fine sport.

Yours, A TWIG OF THE TURF.
J. S. SKINNER, Esq.

A tribute to the Horse—John Wall's recipe.

Take half a pound of saltpetre, half a pound of alum, and half a pound of alum salt; pulverize and mix them well together—and every eight days give him a table spoonful in his food: his coat, flesh and spirits will soon reward his master for his care.

MISCELLANEOUS.

WESTERN BUFFALO—OR, BISON.

(No. 1.)

MR. SKINNER,

Raleigh, N. C., June 5, 1826.

Your attention, as any one will perceive by looking at some of the pages of the "American Farmer," has been called to the very interesting subject of domesticating this *native*, more particularly with a view of rendering him a beast for draught of burden. A correspondent of yours from the west, the gentleman of Nashville, who wrote us some essays on "barn plagues," alias rats, under the signature of Rusticus, has given you some short and descriptive views of this "lion looking animal of the west," more particularly as regarded plans for introducing him by means of cross-

es. This animal, Mr. Editor, which naturalists prove to be the "bison," and no buffalo, is totally dissimilar to the buffalo of the Cape of Good Hope, for instance; indeed, it is much more a resemblance of the *lion*—and to one who has never seen the "monarch of Mount Atlas," a view of the male of the American bison, in his front only, and on his "native prairies," would form no indifferent subject—more especially in the fear and respect with which their "*pas de charge*" attitude never fails to inspire the beholder.

It was hardly to be expected or supposed, Mr. Editor, that the colonists of this country would pester themselves to break and train the savage natives of this western wild, when they found so indifferent a welcome in the first species of its native productions! Indeed, under any circumstances, it was better that at first they should import and make use of the skill, experience, and products of their fathers. But as the same circumstances do not now exist, and as the *main link* in the chain of "Europe transplanted," (as Dr. Ramsay called the United States,) is some time since broken, it is high time that we should make every possible use of our native and domestic resources.

Accounts of this American animal were long since transmitted* to France, and the "philosophical societies and academies" there; more especially as regarded the "long pendulous and nappy wool" which forms so soft and plentiful a covering for the back of this animal. And Governor Pownall, in particular recommends very highly the soft hair as a substitute for "sheep's wool," saying, at the same time, what pleasant blankets the dressed skins make, and how extensively the skins were used for that purpose, more especially in Lower Louisiana.

Among a population who may be said (more especially the western parts of them,) to be "yeomen, woodsmen and agriculturists;" men who may be said to draw in the very "milk of enterprise" from their mother's breast—I say, it is quite surprising that among such men no measures have been taken to domesticate this animal, (the buffalo,) who so plainly belongs to the same race with our domestic animals. For the parts or subjects concerning the natural history of this animal, I refer to the essays of Rusticus, and his account of the attempt of Governor Millar to domesticate; and also I refer readers to "Nature and Art," the part which treats of the United States more particularly.

It is believed that Dr. James Mease, of Philadelphia, has taken some pains in regard to this animal. If so, all would be happy if he would communicate them to the Editor of the Farmer—and we also desire that Rusticus would again raise his voice in favour of this neglected native. The writer of this would be glad to be informed, through the medium of the American Farmer, if any of these animals were ever sent to Europe. He wishes some enterprising patriot of the west, would forward a male and female on to France for Gen. Lafayette, who will take pains with them, more especially as they come from AMERICA.

P. S. The writer means to continue this subject; and hopes Mr. Sibley, of the west, Dr. Mease, and Rusticus, will also "shed ink and light" on this interesting occasion. Whilst the French owned Louisiana they were not inattentive to this animal, more especially the governors.

On the fallacy of the prevailing opinion, that a candle burns away the faster by being snuffed.—By Benjamin Babington, Esq., M. P.

It is a commonly received opinion, that a candle, when regularly snuffed, burns away much faster than when suffered to burn without snuffing; and

hence people submit to the very great loss of light, occasioned by that neglect.

Mr. J. I. Hawkins, many years ago, made experiments, by which he proved, that a candle does not burn away the faster, in consequence of being snuffed; and we are glad to find his experience again confirmed, by the following accurate experiments, made by Mr. Babington.

He had six candles of the best tallow, cast in the same mould, with wicks of twelve threads; these he burned one hour, in an apartment in which the air was unagitated, and at a temperature of 55°. He first performed the experiment by snuffing them every ten minutes, and then without snuffing them at all; being desirous to ascertain what difference in the combustion, the snuffing would cause.

The loss, in weight, of those which were snuffed, varied from 100 to 106 grains: those which had not been snuffed, from 97 to 106 grains. It thus appeared that the consumption of material, in a tallow candle snuffed at intervals of ten minutes, is only 2.75 per cent. more than in a candle not snuffed; a difference very inconsiderable, compared with the difference of light produced. [Tech. Rep.]

CHEAP TRAVELLING.

We observe, by an advertisement, that the proprietors of the Union Line, have reduced the fare to 2 dollars, by the steam-boat Emerald, to and from Philadelphia. A few years ago the fare from New-York to Washington City was \$24—now, by the steam boats and stages, it is only \$9. From this city to Buffalo, a distance of 450 miles, the fare is reduced to \$12. [N. York pa.]

SCRAPS

From late English papers received at the office of the American Farmer.

The three first turnpikes that were ever established in England to collect tolls, was Wadmill in Herts, Caxton in Cambridgeshire, and Stilton in Hunts. These were erected in the reign of James II. and at that time gave so much discontent among the people, that many lives were sacrificed in the riotous attempts to put them down.

Meat in Holland is 2d. per pound, notwithstanding 16,000 cows perished by the inundation last year. The price of fresh butter is only 4d. per pound, pot-
ted 5d.

The steam packet *Enterprise*, the first which has undertaken the voyage to India, arrived in Saugor Roads, Bengal, on the 8th of December, after a passage of 47 days from the Cape, having expended all her coals. The whole voyage, therefore, has not been performed with greater expedition than is occasionally done by sailing vessels.

Was lately launched from the premises of Messrs. Wallis and Co. Blackwall, the largest steam vessel ever built in England, being upwards of 700 tons burden.

The quantity of flax imported into Great-Britain in 1825, was 1,034,336 cwt. The quantity of flax and linseed imported was 2,480,822 bushels. The rapeseed imported was 488,637 bushels.

It is stated in a morning paper, that the commitments to prison under the game laws alone, in this country, amount to more than three times the number of committals for any kind of criminal offence, in the whole kingdom of France.

From the improvement in machinery, lace is so reduced in price, that the best hands in lace-making, who formerly earned 8s. or 10s. can now earn no more than 2s. 6d. or 3s. a week.

According to a Parliamentary return, England and Wales contain 1,667 brewers, and 45,113 victuallers; of the latter 22,598 brew their own beer. Scotland contains 257 brewers, and 5,625 victuallers, and of the latter only 249 brew their own beer.

* From Louisiana.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 23, 1826.

THE LATE CATTLE SHOW.—Remarks upon by the Editor, continued.

CROPS.

Here again it was the sound policy of the Trustees to promote improvements in the culture of the common staple objects of every Maryland farmer. They did not invite him to enter upon the culture of strange things of doubtful value; they offered their premiums to him, who, by the most judicious application of manure and the most skilful mode of culture, should make the most of that, of which almost every man does make more or less. They spread upon their table no less than \$204 worth of pieces of silver, for those who should excel in the productions of wheat, corn, rye, hay, tobacco, cotton, potatoes, carrots, mangel wurtzel, ruta baga; the proprietor of the best apple orchard, and for the most successful experiment in water-wretting, or otherwise preparing flax or hemp.

To gain these premiums, it was not requisite that the article should be exhibited, nor even a sample of it. The competitor himself was under no necessity to attend; he had only to send the certificates of his produce to the Corresponding Secretary of the Society—and, behold! of the seventeen premiums offered for crops, upon terms equally convenient for the farmer in the most distant corner of the state, as for one contiguous to the Show—there were but four of them bestowed. Does not this prove an almost universal indifference to the objects of the Society, and such total want of emulation, nay, even such absence of excitability, as to make one almost despair of seeing farmers enter upon a career of professional and peaceful strife in which honours might be won and benefits acquired worthy of the ambition of the most enlightened minds? In reference to those cardinal objects of every farmer and planter, we do not observe that a single officer of the society laid claim to excellence of management. It is to be hoped they will profit by the example of a lady!—Mrs. West, of Frederick county, who, we rejoice to see, took one of the four premiums bestowed, for an excellent crop of wheat.

HORSES.

In this department of the Exhibition, especially as it respected stallions, the show was creditable to the institution. The number and the qualities of these fine animals, evinced a sensibility to their value, and an attention to their improvement, which augurs well, and gives promise that after some years the breeding of fine saddle and harness horses will be a source of large income to the farmers of Maryland; who now, to their discredit be it said, suffer thousands and tens of thousands of dollars, to go to other states in payment for horses, which are only better than ours because they spring from better stock—that is, from stock which partakes, in all cases, more or less of the blooded horse. Never was the superiority of blood and race more apparent than on this occasion. At 12 o'clock, at the sound of the horn, twenty highly pampered superb looking animals were led upon the ground, all in high condition, buoyant with animation, and impatient of all control. The attention was at first confused with the grandeur of the general display; but when time was allowed for examination and comparison, it was not long before the least connoisseur fixed upon the blood as it passed in the veins. "He treads the air; the earth is more musical than the pipe of Hermes;" "though there were many of great beauty on the ground, the public mind concurred in the choice of this one." "The blood of the horse is more musical than the pipe of Hermes;" "though there were many of great beauty on the ground, the public mind concurred in the choice of this one."

tee, that Mark Anthony and Rinaldo, of the stock of Sir Archy, and bred by the hon. John Randolph, of Roanoke, were "considered to be of the best blood of the country, and decidedly the two finest horses exhibited to their view."

It would clearly be good policy to discontinue premiums for many objects which are unsuited to our climate, and never made the subject of competition; and to increase the number and augment the amount of those offered for domestic animals—more especially the horse, with whose action and powers, almost every movement and operation of the agriculturist is connected.

We must not forget to mention that one of the Trustees helped to eke out the small show of brood mares.

It was without mature reflection that in the last American Farmer, the Postmaster of Baltimore offered to receive and transmit, free of charge, any arrears that might be paid to him for Editors whose papers are delivered through the Baltimore Post Office. It is the known wish of the Postmaster General to be very liberal with printers, as their business is intimately connected with the public interests; hence, at his instance, the new law authorizes editors to send their bills, printed or manuscript, attached to their papers, free of letter postage; and hence his express injunction to all Postmasters to give notice of dead newspapers; but the authority does not extend to the transmission free of postage, of money paid by subscribers, nor does it authorize the use of his frank, by any Postmaster, for any thing else except his own proper business and that of his office. In all cases, therefore, where Postmasters undertake agencies for the benefit of others, they are not justified in using their frank. In the one before us, the Postmaster had no view nor the shadow of interest, but to put gentlemen in the way of doing justice by offering a friendly medium. But where money is received for remission, it must go charged with postage, and of this it is believed few Editors will complain.

Editors who noticed the former paragraph will please copy the above correction.

As an agent for collecting subscribers and subscription money, the Editor has pleasure in recommending Mr. Wm. Porter, as one on whose attention and punctuality every reliance may be placed.

PATENT WHEAT FANS AND PLOUGHS.

Gideon Davis' PLOUGHS kept on hand in all their variety, manufactured in the best manner and of the best materials. The many premiums that have been awarded to these Ploughs at the different Cattle Shows, and the decided preference given to them for easy draught and good work, proves them beyond a doubt to be superior to any others in use. Also Enoch Walker's highly improved, and yet much simplified WHEAT FANS. The price of these are \$18, and perhaps surpassed by none for doing good work, and that with ease. Also on hand, CORN SHELLERS, CULTIVATORS, the cylindrick STRAW CUTTERS, and Brown's well known VERTICAL SPINNERS, for spinning wool. As a domestic spinner for family use, this has probably never been equalled. Gentlemen are respectfully invited to call at the subscriber's Manufactory, No. 36, Pratt-street, immediately opposite the United Hotel, and view the Implements for themselves. JONATHAN S. EASTMAN.

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An Essay on the use of Lime as a Manure, by E. Rufin, Esq.—On Wheat, Corn, Cotton, &c.—New Names for Old things—Officers of the Massachusetts Agricultural Society—Essay on the Durability of Fruits, by T. Pickering, concluded—On the properties, uses, &c. of Milk, continued—Instructions for Training horses for the Turf, by C. Duval—Recipe for the Horse—Western Buffalo, or Bison—On snuffing Candles—Cheap Travelling Scraps from late English papers—Editorial Remarks on the late Cattle Show—continued.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE		RETAIL	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	7 50	8 50		
BACON, and Hams, . .	lb.	5	9	9	12
BEES-WAX, Am. yellow	—	31	33		50
COFFEE, Java,	—	17	17½	22	25
Havana,	—	15	16		20
COTTON, Louisiana, &c.	—	13	14		
Georgia Upland, . . .	—	11	12		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	14	16	18
Dipt,	—	10	11		14
CHEESE,	—	8	10	12	15
FEATHERS, Live, . . .	—	39	31	37	
FISH, Herrings, Sus.	bbl.	2 37	2 50		
Shad, trimmed, . . .	—	7 00			
FLAXSEED, Rough, . .	oush	75		87½	
FLOUR, Superfine, city,	bbl.	4 25	37½	5 00	
Fine,	—	4 00	4 50		
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	72	74		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler,	—	75	85		
do. Red,	—	90	95		sales
Rye,	—	68	70		
Barley,	—	80			
Clover Seed, Red . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . .	lb.	1			
Orchard Grass Seed,	bush	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	2 25		3 00	
Oats,	—	56			
Beans, White,	—	1 70		1 87	
HEMP, Russia, clean,	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	15		25	
HOGS' LARD,	—	7	9	12	
LEAD, Pig	lb.	6½			
Bar	—	8	8½		
LEATHER, Soal, best,	—	23	24	62	
MOLASSES, sugar-house	gal.	45		62½	
Havana, 1st qual. . .	—	30	31	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar,	bbl.	1 37½			
Pitch,	—	2 25			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	31	33	40	
Spermaceti, winter .	—	70	75	88	
PORK, Baltimore Mess,	bbl.	11 00	12 00		
do. Prime,	—	8 00	8 50		
PLASTER, cargo price,	ton.	4 00			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	
SOAP, Baltimore White,	lb.	12	14	18	
Brown and yellow, .	—	5½	7½	8	
WHISKEY, 1st proof, .	gal.	29	31	38	
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	36		50	
SUGARS, Havana White,	c. lb.	13	13 50	15	16
do. Brown,	—	9 00	9 50		
Louisiana,	—	7 75	9 50	10	11
Loaf,	lb.	19	22	20	
SPICES, Cloves, . . .	—	70	75	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes,	bush	43	45		
Liverpool ground . .	—	45		75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 15	1 20	2 00	
Lisbon,	—	1 15	1 20	1 50	1
Claret,	doz.	4	8	5 00	9
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full b'd	lb.	30	35		
do. crossed,	—	20	22		unwashed
Common, Country, . .	—	15	20		but free
Skinnners' or Pulled, .	—	20	25		tags.

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AGRICULTURE.

THE PROPERTIES OF IMPROVED SHORT HORNS, AS DEEP AND RICH MILKERS.

Philadelphia county, May 23, 1826.

JONATHAN ROBERTS, Esq.

President of the Pennsylvania Agricul. Society:

Dear Sir,—I have had occasion to give you an account of the extraordinary quantities of milk afforded by some of the Improved short horned cows, the cream of which appeared to be the richest I had seen. A few days since I was enabled to form a more correct opinion on this subject, by witnessing the operation of making butter. I fear you will hardly credit me when I assure you that I saw perfect butter produced from the cream by means of friction on a plate, in less than ten seconds, although neither the cream, nor the milk from which it had been taken, had been subjected to other than ordinary management.

Some persons are under an impression that the Powelton stock owe their fine appearance to extraordinary care and high keep. Great attention is certainly paid to their cleanliness, but I am not aware, that in any other respect they are treated better than the native cows of a well ordered dairy. In regard to food, I am satisfied that they require less than the common cows of the country. I lived for three years in the western country, where luxuriant pasturage, and cows which certainly would not suffer by comparison with those generally found in the vicinity of Philadelphia, have predisposed me to form rather a favourable estimate of the value of our native cattle.

I have within an hour spoken to Morrison, the man who for more than eight years, has taken care of the stock at Powelton (amounting, during this period, to some hundreds,) who for more than eight years has milked them, fed them, and supplied their every want. He corroborates my impression, that of all the cows, comprising almost every British and native breed, the short horn families have uniformly been the quickest feeders and best milkers. He states that the present stock of short horns on this farm, are superior in quantity and quality of milk, to any which have preceded them; that they are not fed as high as former native and other cattle had been, and that so far from having apprehensions at any time of their "falling off," his principal care, as they approach the time of calving, is to keep them sufficiently low. It is proper to remark that to prevent the exhaustion of these costly dams, they are made dry (always with great difficulty,) two months before calving. Two of the cows which afforded the cream spoken of, calved, one on the 2d, the other on the 23d February last. They have large healthy male calves running with them, notwithstanding which, it is now (23d May,) necessary to milk them twice a day. One of them, Mr. Coates, the Editor of the Herd Book, declares gave in England thirty-two quarts daily, with her first calf.

The supply is very unequal to the demand for these calves, and it is my opinion that it would be so, if twice the number were reared. Farmers, dependant upon the produce of their fields for support, pay from 200 to 250 dollars for calves of seven or eight months. A few weeks since, a person of this description who had purchased one for \$200, assured me that \$400 would not tempt him to part from the animal.

The propriety of the course pursued by our Society, in demanding from those claiming premiums, offered for specific breeds, certificates shewing the pedigree of the dams, as well as of the sires, is exemplified in the fact, that cows, having short horns, but of doubtful origin, have recently been presented to the public, as of "Improved short horn blood,"

whose wretched appearance, and milkless udders, are certainly sufficient to throw discredit upon any breed.

I am, dear sir,

Very truly yours,

JOHN P. MILNOR,
Record'g Sec'y Penn. Agric. Society.

Philadelphia, 3d Mo. 1, 1826.

ESTEEMED FRIEND,

I thank thee for the pitcher of cream, the product of one* of thy *Short Horned Cows*. No stronger proof of the value of that family of animals for the dairy, need be furnished, than the specimen before me. A portion of the cream was subjected to friction, by means of a spoon and plate, and it yielded butter of fine flavour, in rather more than a minute. I could scarcely credit, what my own hand had effected. The farmers of our country will surely adopt this profitable race of stock, for the introduction of which into Pennsylvania, they, as well as our fellow citizens generally, are indebted to thy practical judgment, and disinterested zeal.

With great regard and respect,
I am, &c.

ROBERTS VAUX.

JOHN HARR POWEL, Esq.

Chester county, April 2, 1826.

JONATHAN ROBERTS, Esq.

President of the Pennsylvania Agricul. Soc'y:

Dear Sir,—The interest you take in all matters connected with the improvement of farm stock, makes it unnecessary for me to apologize for giving a detail of an experiment to test the richness of cream afforded by Mr. Powel's Improved Short Horn cows.

The cream was evidently fresh, and was stated to have been taken from milk twenty-four hours old. It was converted into butter in my presence, in a quarter of a minute, whilst I held the watch in my hand, although it had been skimmed but half an hour.

I have interrogated the person by whom it had been skimmed, and under whose inspection the milk had been deposited.

I am satisfied from her statement, and that of the person on the farm, that no extraordinary care, nor management, nor food, have been employed to produce such result.

Very truly yours,

WM. HARRIS.

It is not intended to imply by the foregoing notes, that cream of such richness is often obtained from Improved short horns, or any other race of cattle; nor to convey the belief, that one or two other families, do not afford cream equal in richness, to that produced by the general herd of the best improved *dairy short horns*. But it is intended to prove, that independent of their claims through early maturity, quick feeding, and deep milking, instances of richness in cream, may be found amongst them, quite as extraordinary as those of any other race of neat cattle; although it is not pretended, that if this cream were "mixed" with the cream of other cows, it would "come first," and could be "taken out of the churn," as the miraculous Alderney cream, without commixture with butter formed from the rest.

At a late meeting of the Pennsylvania Agricultural Society, a statement was produced, shewing that their premium for Improved Durham Short Horned Cattle, has been sanctioned by the opinions of

* It was from three cows.

† See Mr. Haines' letter—Memoirs Pennsylvania Agricul. Society, p. 21.

practical farmers, who by their purchases have given the most decided evidence of the estimation in which this race is held.

It appeared, that since June 1822, the sales at Powelton, (in all instances except four, to persons who derive their support from the soil which they cultivate,) equal 7,690 dollars—that from the 1st January to the 15th May, nine animals, of which eight were calves, have been sold for 2130 dollars; yet from the continued importations, and the extravagant cost of the high bred animals in England, it was shown, that no profit has thus far been derived from the thorough bred stock; all under three fourths breed since 1823, having been gratuitously disposed of.

CECROPS.

THE ART OF BREEDING.

(American Farmer, Vol. 8. No. 6.)

MR. EDITOR,

A young gentleman, with a hard name, has taken it into his head to quarrel with Sir John Sebright's opinions on breeding. We who well know him, by certain phrases and hacknied remarks, are not less astonished at his having assumed the name of the founder of Athens* than surprised at his scientific research, and elaborate investigation, carrying him to "Lebanon in Palestine," introducing him to the "Druses," Mr. Cooper's vegetables in New Jersey, "modern physiologists" and "moot points" among lawyers, to elucidate his notions of breeding calves and sheep.

Let us see how the Athenian monarch, whilst building an hypothesis upon a sheep's face, adheres to "logical deduction," for which he would appear to have so much regard. He says—"Now, ALL WELL BRED Southdown sheep have DARK FACES, and dark legs; yet I have never heard of any breeder expressing an apprehension, that the black colour would, in three or four generations, extend gradually from the face to the very tip of the tail. On the contrary, A BLACK BODY, or A WHITE FACE would be considered, either as shewing a deviation from the blood, instead of proving that they had been too closely bred in—or else, as an instance of the slight tendency to change, already mentioned, and which the breeders are careful to counteract."

He might as well have said, that breeding in and in, would give a sheep two heads, as imply that according to Sebright's theory, it would of consequence, distribute the blackness of a Southdown's face to the very tail, for he has ingeniously assumed, that blackness upon the head, and the absence of blackness from the body, are received as characteristic marks of the purity of the blood.

I apprehend, that he has not seen half a dozen Southdown sheep in his life, and therefore venture to inform him, that they have faces varying in colour from every shade of black to brown. In the language of Young—"Southdown farmers breed their sheep with faces and legs of a colour, just as suits their fancy. One likes black, another sandy, a third speckled, and one and all exclaim against white."

Sebright knowing that all domesticated animals are disposed "to go back," as having some tendency towards constitutional defects, and inferring that those of the same family are likely to be affected by tendency towards the same point, thinks, that any man, who knows that two and two make four, can believe, that by the union of animals so situated, and having such tendency, the defects will, in the offspring be increased.

It is not our intention to pursue all the fallacies of the reviewer's deductions, which however "logical" in his estimation, are founded sometimes upon assertions, not supported by facts, and sometimes

*This old gentleman lived only 3382 years ago.

upon quotations, not merely mutilated, but so arranged, as to meet exactly his own views. Sebright says,—"Mr. Meynell sometimes bred from brother and sister; this is certainly what may be called a *little close*: but should they both be very good, and particularly should the same defects not predominate in both, *but the perfections of the one, promise to correct in the produce the imperfections of the other*, I do not think it objectionable: much further than this, the system of breeding from the same family, cannot, in my opinion, be pursued with safety."

Cecrops finds it convenient to leave out the words,—"but the perfections of the one, promise to correct in the produce, the imperfections of the other," thus clipping the author's sentence, suppressing his meaning, to make himself appear wise, and Sebright absurd.

Cecrops continues from Sebright—"although I believe the occasional intermixture of families to be necessary, I do not, by any means, approve of mixing two distinct breeds, with the view of uniting the valuable properties of both. If it were possible, by a cross between the Leicester and Merino breeds of sheep, to produce an animal uniting the excellencies of both, even such an animal, so produced, would be of little value to the breeder, a race of the same description could not be perpetuated."

Here Cecrops stops him in the middle of his sentence, which continues—"and no dependance could be placed in the produce of such animals; they would be mongrels, some like the new Leicester, some like the Merino, and most of them with the faults of both."

Upon this fragment of a sentence, the critic rejoins—"Here the writer, with respect to the perpetuation of the breed so obtained, besides going contrary to common observation, contradicts what he says in another part of the essay, where he speaks of varieties of domestic birds obtained, and continued solely by the art of man."

We do not know what is meant by common observation, but we had supposed that this gentleman, had learned that the first cross is an "half bred;" the second three fourths, the third seven eighths; the fourth fifteen sixteenths, and so on. Of consequence the variety obtained by the first cross could not be perpetuated, as the proportions of blood would annually vary, producing new varieties; which after a long time, great vigilance, and much more than common observation might be established, constituting that which is technically called "an improved breed."

For it cannot be denied, that the offspring of a male and female of precisely the same degree of affinity to two distinct breeds, would not generally exhibit precisely the same characteristics, nor would they show precisely those of the sire and dam. In some the attributes of one of the breeds would predominate, whilst in some those of the other would in different degrees most probably appear.

Do we not find facts, corroborative of this, in the human family? But when the most desirable points and properties have during many generations been determined, by the skill of the breeder in selecting the animals, which most nearly approximate the excellence which he seeks—in uniting those whose union would by "the perfection of the one promise

to correct in the produce, the imperfections of the other," "a new variety is obtained."

The Leicester sheep has long and coarse wool, with an open fleece—the Merino has short and fine wool, with a close fleece; the properties, points, and general conformation of these animals, are opposed as much, as those of any beings, of the same race, with which we are acquainted.

The product of the first cross, between a Merino and a new Leicester sheep, would be covered probably with wool of medium texture; but when carried farther, it might become too short for combing, too long for the general manufactures of the country. New varieties are obtained by crosses.

Sebright does not approve of crossing distinct races, and gives an instance to shew, what he means by "distinct races." For it is evident that the term "race," is not always used in the same sense, nor should we have used it as he has done. The quadruped race embraces all animals having four legs, yet we find the term "race" applied frequently to a variety of a particular species; the improved Leicester sheep, are called new Leicester, or the Dishley race.

It is evident, Sebright did not object to mixing animals of races which he does not qualify by the term "distinct," for in the next sentence, he tells us, that Merino rams, are frequently put to South-down and Ryland ewes, *all being of the fine woolled race*, which he approves with certain views. Nor would he object, to uniting the Arabian with the turf horse, for he knows, that the best turf horses had been so produced; but he would oppose the union of a Welch pony with a draught horse, or an Arabian courser with a Suffolk Punch if he desired animals either for the turf or the road. He knows, that certain varieties, sometimes fortuitous, sometimes the product of design, afford the means of establishing improved races of animals, or of meliorating cultivated fruits.

As the Baronet had, without the parade of his classical, geographical, physiological, legal and logical knowledge, modestly and calmly given, the results of his experience, to his friend,* adding—I have freely stated my opinions, "without considering them, as conclusive, and shall be much gratified, if they induce others to direct their attention to a subject, which appears to me of great importance to the agricultural interests of this country;" if he had not been sufficiently explicit, in the first part of his sentence, it would have been charitable to hear him to the end, and possibly wise, not to excite pity in behalf of a being so small, about to be crushed by a giant's grasp.

I shall leave the English Baronet, and the Athenian Monarch to settle their differences upon the best mode of propagating farm-stock, as I presume his majesty will not recommend any new mode of improving our own race, whatever may be the practices, amongst the hardy "Druses," or the peculiar attributes of any particular instance of fecundity, which may happen to be in his eye.

A FARMER.

[This controversy, which we would gladly have avoided, must cease in the Farmer.]

MAMMOTH OX.

A few days since, on a farm in Greenland, belonging to M. C. Pierce, Esq., of Portsmouth, we measured an Ox, 7 years old, of an extraordinary size. His girth, just back of the fore legs, was 9 feet 14 inch. His length, from his nose to his shoulder blade, was 4 feet, minus 2 inches; and from thence to his rump, 8 feet and 2 inches—making his length exactly 12 feet. His breadth across the back, from one hip joint to the other, is 4 feet 9 inches. He weighed in January last 3,038 lbs., and is now probably two hundred pounds at least heavier.

* The President of the Royal Society.

He had no remarkable keeping for the two first years of his life, but the owner finding how rapidly he grew on common fare, has kept him nearly under the full force of feed since. The animal is well shaped and sprightly, and although they call him of common breed, he descended no doubt from a stock of cattle imported by Governor Wentworth about sixty years ago. A few of the race we have seen near Wolfsborough, in New Hampshire, where Wentworth had a large farm. The blessings derived from a good agriculturist are often remembered when the politician's deeds are forgotten.

[Boston Gaz.]

TURNIPS.

DEAR SIR, Campbell Station, Tenn., June 12, 1826.

I am advised by a man of the name of Jackson Smith, near Athens, in this state; and another near this place, by name Moses Defries, that for several years past they have ploughed their turnips after sowing the seed and having the ground properly prepared; and when ploughed with a large coulter and about six inches deep, they have never failed to raise plenty, and have good crops. They are both men I can believe. I plant all my corn, laying the furrows off with a large coulter, 4 inches wide and running about 8 deep, and believe it answers much better than that planted in the usual way.

SAMUEL MARTIN.

INFORMATION WANTED—HAY.

Petersburg, Va., June 8, 1826.

The Editor of the American Farmer will confer a favour upon me, by informing me of whom and where I may be enabled to obtain a machine used for the packing of hay. The hay which we import from the north, (New York particularly,) comes here in bundles of from 350 to 400 lbs. each. I have a farm upon the river, about 60 miles from this place, which produces large quantities of hay, and am anxious to have it packed, so as to enable me to transport it, as is done by the New Yorkers. State the usual price, if you can give the required attention.

Respectfully,

WM. ROBERTSON, Jr.

USEFUL HINTS.

The following items of information we have derived from several agriculturists, with whom we have lately had the pleasure of conversing.

TAR FOR SHEEP.

A gentleman, who keeps a large flock of sheep, says that during the season of grazing, he gives his sheep tar at the rate of a gill a day to every twenty sheep. He puts the tar in troughs, sprinkles a little fine salt over it, and the sheep consume it with eagerness. This preserves them from worms in the head, promotes their general health, and is thought to be a specific against the rot.

BOTTS IN HORSES.

A traveller tells us that the stage drivers on routes leading from Albany to the western parts of the state of New York, in giving water to their horses on the road, mix a little wood ashes with their drink, which they say effectually preserves them against botts.

SALTING CATTLE AND SHEEP.

We are informed by a practical farmer, that in giving salt to his cattle and sheep, he mixes it with unleached wood ashes. The mixture is composed of one quart of fine salt to one half bushel of ashes. To this composition his cattle and sheep always have access. He thinks it increases the appetite, and preserves the health of the animals.

[N. E. Farmer.]

* But Sir John gives us to understand, that Bakewell was addicted to telling fibs about his stock. Upon what authority he says this, he has not informed us. He mentions also a breeder of fox hounds, a Mr. Meynel, and observes: "Mr. Meynel sometimes bred from brother and sister; this is certainly what may be called a *little close*; but should they both be very good, and particularly, should the same defects not predominate in both, I do not think it objectionable; much farther than this, the system of breeding from the same family, cannot, in my opinion, be pursued with safety."

HORTICULTURE.

HORTICULTURE—ENTOMOLOGY.

San, Charleshope, N. J., June 19, 1826.

The cultivation of fruit trees being my business as well as my amusement, I have devoted all my time to it, and have been so far successful as that I am no longer injured either by the peach tree fly or by the disease called the yellows. By reason of the same watchful care I do not suffer from caterpillars, and I have the pleasure of seeing my trees grow in size and luxuriance. But whilst I have conquered these three great enemies of the orchardist, I am assailed by a fourth, which has assumed so formidable an appearance that unless speedy means be taken to get at the root of the evil, it will be worse than useless to plant a tree.

I allude now to the insect that stings the fruit of the peach, plum, cherry, nectarine and apricot.

For years has this insect been *silently* and *unmolested*, working destruction to these fine fruits, and although every one has been aware of the ravages that are yearly committed, and although many persons have called public attention to it, yet the subject has never been satisfactorily investigated.

It being of great importance to me to discover the kind of enemy that thus yearly destroyed my fine fruit, I read every article that bore on the subject; but there were so many contradictory opinions and surmises, and the modes of prevention were so much at variance that I was compelled to leave speculation and vague statements, and trust to a laborious personal investigation of the thing myself.

I need not trouble you with an account of the length of time that it occupied to convince myself of the correctness of my observations, nor shall I dwell on my frequent perplexities and my frequent intention to abandon the investigation altogether, but shall proceed to say that there is no longer a doubt as to the kind of insect that destroys the fruit, and that the remedy for the evil is within our reach.

Under the head of *calioptera* in Entomology, is a description of the *May bug*, or *chestnut coloured beetle*. Under the article beetle, in Buffon's Natural History, is a concise history of the insect. As books like these are within reach of the curious, it is not worth while to take up room to go into the particulars of this formidable insect's history, I shall only briefly touch upon what immediately concerns us.

In the first week in May, about dusk, the brown or chestnut beetle creeps quietly from its hole in the ground, but more particularly from a sod of grass or clover; it rises slowly and heavily with a dull buzzing sound, not unlike a drone, and flies in a straight line to the nearest fruit tree. Here it alights either on a branch or leaf. If on the extreme end of a tender twig it does not leave it until the twig is destroyed; if on a leaf, it strips the leaf of all the succulent parts. It hangs clinging to the twig or leaf until its hunger is appeased, and then it either drops down and crawls under some large weed or bush, or else creeps into a hole in the ground, where it remains until the next evening, when it again rises and pursues the same course.

Its existence as a beetle is from two to three weeks; in the last stage of its life it makes a semi-circular incision in the fruit of the tree—deposits its egg—makes another similar cut, perhaps three or four on the same fruit—deposits an egg in each and then perishes. Sometimes it crawls to a hole and there dies, but more generally it flies or crawls to the nearest water and is seen no more. As soon as the puncture is made in the fruit by the sharp forceps of the beetle, a transparent exudation of gum takes place, into which the egg is deposited, when it soon hatches and becomes a small maggot.

This maggot grows larger every day, accommodating itself to the size of the fruit into which it is deposited. When it has completely destroyed the circulation, by surrounding the kernel, the fruit falls to the ground. Here the worm enlarges, and in August it has acquired sufficient strength to leave the hollow shell, which the fruit now becomes, and enter the ground. It now requires no nourishment but what it absorbs from the earth, after the manner of other reptiles, but keeps descending until it gets below the reach of frost; here it remains until the first week in May—and now comes the most interesting part of the subject. This very offspring of the beetle comes up within a few inches of the surface in the form of a grub worm—yes, sir, those white worms with pale yellow heads, are the progeny of the beetle!

In this the second year of its existence, it eats voraciously of every living succulent root, and continues its unnoticed devastation until autumn, when it again betakes itself to a safe point, out of the reach of frost which is its bane.

It lies throughout the winter in a torpid state, and then once more in the spring it rises in the grub worm state, stronger and larger, and of course more destructive than the year before. It is now about an inch and an half long, and about one-third of an inch thick; it becomes unwieldy and feeble; it goes earlier below to its place of rest, and gets even deeper than ever in the ground: here, from two, three to four feet below the surface, it takes its final leave of the grub form; it hollows for itself a small hole into which it lies coiled, gradually changing itself into a kind of chrysalis, and then by slow degrees forcing itself up to the surface. Whilst in this state it does not eat, but its sole object seems to be to reach the top, which it accomplishes in three months, its sheath hardening and its wings expanding as it progresses on its journey, until some fine evening in the first week in May, it leaves its hole and flies to the first tree that suits its taste, a perfect beetle.

What is said of this brown beetle applies, with but little variation, to a whole class of beetles—only varying in shape, in colour and in taste, all preying on the industry of man, and all undergoing the same changes; some alternating from beetle to grub every other year—some every two years, and some, as in the case of the May bug or brown beetle every fourth year.

As soon as I felt certain that I had identified the grub and the beetle, I prepared myself for their approach; and accordingly on the 3d of May, at dusk, I saw the first flight. The flight of the beetles was simultaneous, and the buzzing was heard for twelve or fourteen minutes. All my domestics, male and female, including out-door servants, went to work. We laid a large sheet under a plum tree, two persons standing near with lamps, one with a pail half full of water, and the rest to pick up the beetles as they fell. We gave the trunk of the tree a sudden slap with the open hand, and the beetles fell in great numbers, as if stunned; they were then hastily picked up and thrown into the pail of water. In this way, in less than an hour, perhaps only half an hour, we shook the beetles from 20 or 30 trees.

I am almost afraid of saying how many were caught this first night. We nearly filled two pails with beetles!

There was every variety of them, from this large brown May bug, which looks not unlike a chestnut, to the little pale yellow melon beetle. We went out the second night, and extended our search: we travelled over from thirty to forty trees in infinitely less time, having learned the sleight of the thing. This night we only got half the quantity of beetles. We pursued this course for two weeks, thinning their numbers, until at the end of the fortnight we could not get half a dozen from the whole number of trees.

The smaller beetles disappeared after the third night, and the large brown beetles were the only ones that continued. I spoke of thirty or forty trees. I only made the experiment on these as they were near my house; but every tree, excepting the cedars, silver pines, and indeed all the resinous tribe, were covered with them—mountain ash, horse chestnut, English walnut, rose bushes—every thing: I am surprised that any green thing was left. I made a large bonfire, thinking that as they are frequently flying in a room in the evening when the candle was lighted, that this great light would attract them; but not more than three or four were decoyed into it, although millions of the smaller moths and ephemeris flew to the spot and were destroyed.

In consequence of thus stripping the trees of the beetle, my plums were saved. I found, however, about a week after I stopped searching for them, that a few beetles who were more tardy than the rest, had made their appearance, and that several of my plums were stung. I ought to have continued my labours a little longer. The plums that were at a distance from the house have all dropped off, and every third peach is stung and has fallen to the ground.

What is to be done? I have taken great pains in informing my neighbours and friends of these facts, and have begged them to co-operate with me in destroying these insects; but it must be the work of time—so few will believe that the common white grub worm that is seen when a sod is turned over by the plough, is to be a beetle in another year; fewer still will believe that the *cut worm*, the *corn-worm*, the *cabbage-worm* and the melon worm, (for the vines have worms at the roots as well as bugs at the top,) are all the progeny of various kinds of beetles.

My practice now is, to plough deep every inch of ground adjacent to my orchards, every fall, and to destroy every thing in the chrysalis, or grub, or larva form that is visible. In the spring I plough again; that is, in the ordinary course of business, and then suffer the black birds and crows to follow the plough and pick up the grubs. I intend to employ little boys next spring to pick up these grubs. I have shown so much solicitude on this subject, that my workmen now destroy every insect that they see: this will in a few years thin off those that infest my farm; but unless it be a general concern, (and who are not injured by it?) it will be of small avail that I pursue this course—for I shall have to encounter those that come from other farms.

I have tried every plan recommended. Those trees that were paved at the roots were stung as well as the rest. Brimstone did not annoy them. I have elder bushes planted all over my farm; in short I have tried every thing that appeared to be reasonable. Nothing but *ploughing deep*, and then killing off the beetle in the spring, and encouraging birds to remain on your farm, will exterminate these destructive insects.

I have made this article almost too long; but it is of such importance to get every one interested in destroying the beetle, that I know you will give it publicity. If every one will go earnestly to work, in a few years this country will be covered with the most delicious fruit, for our climate is suited to the choicest kinds, and a new source of pleasure and wealth will be opened to us. To rid an orchard of beetles, is not so herculean a task as to banish the weeds called St. John's wort and mullen.

The only difficulty that I see, is that the beetle commits its ravages at night. Few servants like to assist after their regular working hours are over, and it is a tiresome business to do all yourself;—where there are many trees this could not be done. As to the locusts, I shall touch on that subject in another paper.

Yours, respectfully,
A SUBSCRIBER.

COFFEE.

The following passage occurs in a letter from Cuba, published in the Boston Monthly Magazine. The detail of the manner of producing and consuming a favourite berry, will interest coffee bibbers, which takes in nearly the whole community:

"The coffee tree is a native of Africa, where it is not treated in the same manner that we treat it. We first plant the ripe berries in a nursery, that is in a manner shaded, to prevent the young plants from being scorched. The seeds are sowed in rows at sufficient distance to admit hoeing, as they must be kept free from weeds. They should remain three years in their seminary; they are then drawn, and the tops cut off within three or four inches of the root. Holes are previously dug in the fields that are to receive them, fifteen or eighteen inches deep, six feet apart; in these the young plants are set so firmly as not to be pulled up by a strong man. In three years they produce a small crop; in four a full one. If permitted to reach their natural height the coffee tree would grow from fifteen to eighteen feet; but we do not allow them to exceed five, both to facilitate the gathering of the berries, and to increase the quantity, as that nutriment would be conveyed to a tree of sixteen feet, being confined to five, naturally expends in the fruit what would have gone to the branches of a larger plant. The trunk is small, the branches long, slender and horizontal, coming out in alternative pairs, or, in scientific phrase, are decussate. The leaves are large, lucid, waving, of a beautiful deep glossy green; while the lower branches being longest, gradually shortening towards the top, the whole plant appears like a pyramid of green foliage, with white flowers or red fruit. They blossom in February, and continue in bloom two months, or more. The flowers are white, much like the jessamine in appearance, and something like it in perfume, only less odoriferous. At this period, what in the vegetable world can look more lovely than a field of coffee trees? The beautiful green leaves, contrasted with innumerable white blossoms, is a charming sight. The fields too are laid out in regular squares, the borders of which are adorned with mango, orange, avocado, and other fruit trees, together with the *sæchymene*, the *leasalphmæ*, and other flowering trees and shrubs add much to the beauty of the scene. Did you meet no living objects to contradict the idea, you would fancy a well ordered coffee field to be a second garden of Eden; or you would imagine the ancients would not have placed Elysium on any island but this, had they but known Cuba. A very brief walk will destroy this illusion, however, and convince you the curse has fallen here as elsewhere.

"The average quantity of coffee to each tree per annum, is one pound. When the berries are ripe, as they begin to be in September, they are picked off by hands, laid into heaps for two or three days, until the pulp begins to ferment; they are then spread upon sicaderos to dry, being raked and covered at night or on the approaching rain. When thoroughly dry, they are hulled in the same manner as the coffee of the other countries."

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over the world, was not known even at Constantinople, where it constitutes at this period half the sustenance of the people, until so lately as 1554. During the Turkish lent, coffee is not allowed to be used. The first known in England was in 1652, and was introduced by a Mr. Edwards, who not only brought home coffee from Turkey, but also a servant who understood roasting and preparing it. This same servant, who was a free man, was the first who sold coffee, or rather established the first coffee-house, which was in a shed.

"It was first carried into France in 1635, by Thevenot, the eastern traveller, but was not much used until 1660, when some bales were brought into Marseilles. Some of the eastern nations use it in substance mixed with oil, and say that a ball of this mixture, of the size of a tennis ball, is equal to a loaf of bread, or a meal of meat.

"The trees, in good soil, will continue to bear half a century, and one negro can take care of twenty-five hundred trees; but he cannot pick all their berries in season. In gathering these, a field must be gone over a number of times; all are not ripe at the same period. The size and colour of the ripe fruit is much like *cranberries*—but in formation it is a *stone fruit*, like the cherry, two of those seeds you receive being found in each. In new, rich soil, there are sometimes *three*, and in old trees, in dry soil only one. In Arabia the trees grow to their natural size, and consequently produce a much less quantity, and also much smaller fruit. Hence it is that the Mocha coffee is so superior to ours. We endeavour to raise as much, and as *large* coffee as possible, because this sells the best in your market. Yet it is by no means as fine flavoured as the small white coffee that is hardly saleable. I always choose for my own use, what was called refuse, and find it far superior to green coffee. The poorer the soil, and the worse the trees look, the finer flavoured is the seed; but in this case they bear but a small quantity, and that would not sell.

"Age has a good effect upon coffee. If kept in a dry place, the flavour will improve every year; and many gentlemen in England keep always stock for seven years on hand. But it must be kept from the vicinity of any article that could taint it, for there is nothing imbibes the taste or smell of other bodies so quick or so powerfully as coffee. Whole cargoes of it have been ruined by being placed too near to casks of rum, sugar, spice, &c.; nor is it possible, by any process whatever, to renew it when once tainted. Coffee ought to be kept by dealers, in a room by itself, and in a very dry place; instead of which they are apt to select as damp a one as will not wholly ruin it, in order to make it weigh heavier. Coffee might be cultivated in some parts of Louisiana; but perhaps not enough to make the introduction a profitable object of profit."

TYPE AND SIZE OF TREES DESTROYING
THEIR NEIGHBORS.

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soap, and mixed with these lime enough to make a thick white-wash. With a white-wash and paint brush, I put this upon the trunks and limbs of the trees, as high as was practicable, filling the cracks in the bark, and covering the whole surface. The effect has been, not only to destroy most of the lice, but to give the trees an improved and vigorous appearance. The outer bark, which, from a stunted growth, had become rough and hard, has, in a measure, fallen off in flakes, and disclosed a soft, smooth bark, the sure indication of health. I intend to repeat the operation next season, and have no doubt I shall succeed in eradicating the evil.

The lice hatch between the 20th May and 10th June, when each core, or blister, sends out a colony of 20 or 30 young. "The nits produce white animalculæ, resembling a louse, so small they are hardly perceptible to the naked eye, which, immediately after they are hatched, open the passage at the end of the blister, and crawl out on the bark of the tree, and there remain, but with little motion, about ten days; when they stick themselves fast to the bark of the tree, and then die. From this little carcass arises a small speck of *blue mould*, which is most plain to be seen between the 10th and 20th June, and continues about fifteen days, and then gradually wears off until the old carcass appears, which, by this time, is formed into a new blister, and contains the spawns, or nits before mentioned." It is during the period of transformation only, that the alkali, or lime is supposed to be effectual.

J. BUEL.

CULTIVATION OF THE VINE.

We learn from the Philadelphia Gazette, that the vine is cultivated in Pennsylvania to an extent of which few persons have had any idea. In the immediate neighbourhood of the borough of York, there are one hundred and fifty acres of vineyards, some on the tops of mountains, and some in the bosoms of vallies. In Adam, and in Westmoreland the culture of the vine is also attended to; and one gentleman in Chester has a vineyard covering thirty acres. Only a few days ago, a house in Market-street advertised for sale, wine manufactured in the neighbourhood of Lancaster.

The extent to which the vine is now cultivated, makes us regard it as no longer a matter of experiment. If similar success should attend the attempts to introduce the culture of silk, we shall not long be under the necessity of giving our flour to our horses to get rid of it.

LADIES' DEPARTMENT.

NUTRITION—FOOD.

(Continued from p. 110.)

Milk of goats emits a particular odour, very much resembling that of their perspirable fluids: it is less offensive in those which are white, those that wear horns, and those properly tended. At certain seasons, this odour is remarkably intense. The milk itself contains a greater proportion of curd than the cow's, but is more viscid. Butter separated from its cream, has considerable firmness, and is at all times white; it is proportionately more abundant than that of cows and sheep.

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by the Godolphin Arabian out of the famous "Little Hartley mare" by Bartlett's Childers, a son of the Darley Arabian.

Janus was imported into Virginia by Mr. Mordecai Booth, of Gloucester county, Va., in the year 1752; his dam was got by old Fox, (whose name stood eminent in the English pedigree,) his granddam by the Bald Galloway.

Although Janus partook of every cross in his pedigree calculated for the distance turf horse, yet his stock were more remarkable for speed than bottom. Janus from his shoulders back was considered the most perfect formed horse ever seen in Virginia, by the most skilful connoisseurs; he was remarkable for roundness of contour, strength of articulation, and indicating great powers and stamina in his whole conformation.

His stock partook of these qualities in an eminent degree, and for thirty or forty years they were considered as a "peculiar stock," as they invariably exhibited even in the third and fourth generations from the old horse, the same compactness of form, strength and power. The Janus stock have exceeded all others in the United States for speed, durability and general uniformity of good form: and more good saddle and harness horses have sprung from them than from any other stock.

The cross of Janus is considered by many judicious sportsmen as a valuable one for the turf, if combined with other crosses that have been noted for bottom: from the Janus cross is derived speed, the first essential quality of the turf horse. Celer was justly considered as the best son of old Janus, as he propagated a stock equal in every quality to those of the stock begotten by his sire. He was bred by Mr. Mead, of Virginia, and foaled in 1774, and died in 1802, aged 28 years.

As the pedigree on his dam's side is not generally known, I will here give it. The dam of Celer was got by the imported horse Aristotle, a brown bay, finely formed, full 15 hands high, bred by Mr. Bladen and got by the Cullen Arabian, his dam by Crab, his grandam by Hobgoblin, great grandam by the Godolphin Arabian, out of a famous mare called White Cheeks.

No. III.

Morton's imported horse Traveller contributed in an eminent degree to the improvement of the turf stock of horses in Virginia. He was a bay horse, foaled about the year 1748, and was a covering stallion at Richmond Courthouse, Va. as early as the year 1754. He was bred by Mr. Crofts, at Raby in Yorkshire, (who was the fortunate breeder and owner of some of the first horses in England,) and got by his famous horse Partner, who was a grandson of the Byerly Turk, and was himself the grandsire of King Herod. The dam of Traveller was by Bloody Buttocks (an Arabian)—Greyhound; Makeless; Brimmer; Place's White Turk; Dods-worth; Layton Barb mare. Morton's Traveller was bred from the best running stock in England in that day: the famous Witherington mare was full sister to Traveller: she bred Shepherd's Crab, and other capital racers.

Morton's Traveller got Tryall and Yorick out of Blazella, imported, and Burwell's Traveller out of a Janus and Lycurgus; also Lloyd's Traveller out of a Jenny Cameron, and Tristram Shandy out of a Janus, and Ariel full brother to Partner, and Partner, out of Colonel Tasker's imported mare Selima.

Partner was the best son of Morton's Traveller, proving to be not only a fine race horse, but a valuable stallion. He was foaled about the year 1755. Partner got Rockingham out of Nelson's imported mare Blossom, and Fitz Partner out of the dam of Celer and the celebrated horse Mark Anthony.

Mark Anthony's dam was by Othello, (a son of Mr. Parton's capital English horse Crab,) his gran-

dam the imported mare Moll Brazons: she was sired by Spark, who was imported to this country by Governor Ogle, of Maryland, and was given to him by Lord Baltimore, who received him of Frederick, Prince of Wales.

Mark Anthony was foaled about the year 1763, and did not exceed fifteen hands in height, and was a horse of beauty and intrinsic value, whether viewed as a racer or stallion. In the former character he was not excelled by any horse of his day, being "remarkable for his swiftness," having at the same time good-wind, enabling him to run four mile heats in good form. In the latter character he stood deservedly celebrated, and propagated a stock which were held in the highest estimation for their various valuable qualities, whether for the turf, the saddle or the harness. Mark Anthony got Collector out of a Centinel, and Monarch out of a thorough bred mare, and Romulus out of a Valiant.

Yorick got Pilgrim out of a Little Davie, and Bucephalus out of a Careless, and Junius out of an Othello.

Burwell's Traveller got Southall's Traveller out of an imported mare, and Camillus out of a Fear-nought mare.

Lloyd's Traveller got Leonidas out of a Morton's Traveller mare. Junius got Spangloss out of a Jolly Roger mare.

A FRIEND TO THE VIRGINIA TURF HORSE.
(To be continued.)

AQUATIC SPORT.

The public have lately seen accounts published from the Savannah and Charleston papers, of several boat races which have taken place at those places, and of the fame of a Savannah boat called the Razor. Some of our citizens who were present at those sports, received a hint, that if the New Yorkers wished to try their hand with the Southerners, they might have an opportunity by communicating their wishes. These hints have been communicated to our Whitehall Aquatic Club; a challenge has been sent to Savannah, that the Whitehall Club will contend with them for a purse of \$10,000—5,000 a side, to be increased if desired, to row a distance of not less than three, nor over six miles, the boats to be rowed by six men each, with a coxswain. The Whitehall Club proposes the race to take place at Baltimore, being about equi-distant between New York and Savannah, where both parties will be strangers to the currents, so as to have a fair race. [N. Y. Daily Adv.

PIGEON SHOOTING.

A party of about forty gentlemen assembled near Germantown a few days since, to shoot for a valuable fowling piece, which the owner was desirous of selling. Each person paid \$5, for which he was entitled to six shots. Three hundred wild pigeons were procured for the occasion, to be shot at on the wing, only one being thrown up at a time. The prize was gained by Mr. Doughty, of this city, who brought down his six pigeons in the finest style. The interest of the scene was heightened by the chance given to the poor birds to regain their liberty. [Phila. paper.

MISCELLANEOUS.

REPORTS OF THE WEATHER.

MR. SKINNER, June 21st, 1926.

I have often lamented there was no way to ascertain what weather there was at such a place on such a day, &c. I don't mean Dr. Little's (of Washington) *cyrrhus, cumulus and nebulus and caloric*—but when we had a fine beneficial rain, and where and how far it extended.

I observe in your last American Farmer, an extract from Cecil county, from a person who says he has had no rain since the snow on the 10th of April.

I now inform you, that after having been literally burnt up here, (not having any strawberries, not being able to save seed peas, and some beds that never blossomed,) on Sunday, the 18th, it began to rain before day, and that from 7 o'clock in the morning till 4 in the evening, the rain was incessant, yet not to do any damage. From five separate measurements, I ascertained the fall of rain to be in that time, on an average 44 inches. And on the 19th, in the evening, another rain (that would have made a season, as planters call it, without the first, that of the 18th,) seemed to be very extensive. I should like to know how far south and north; it came from the south of east. Yesterday a fine rain went down towards Mount Vernon, and just now we have the same appearances. It is now raining, 4 past 3 o'clock.

GESTATION OF ANIMALS.

The period of gestation varies in different animals; in the larger kinds it is a process of longer duration than in the smaller. In the elephant, and the whale, it takes up many months: in the mare eleven months, in the cow about nine months; the sheep five months; swine about 150 days; dogs about 60 days; hares and rabbits bring forth about the thirtieth day.

The Memoirs of the National Institute of France, contain an interesting communication on this subject, by M. Tessier, whose observations he details as follows:

1. Cows.

One hundred and sixty cows were observed.
14 calved from 241st to the 266th day; that is, from 8 months and 1 day, to 8 months and 26 days.
3 - on the 270th day.
50 - from the 270th to the 280th day.
68 - from the 280th to the 290th day.
20 - on the 300th day.
5 - on the 308th day.

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Consequently there were 67 days between the two extremes.

2. Mares.

One hundred and two mares were observed.
3 foaled on the 311th day.
1 - on the 314th day.
1 - on the 325th day.
1 - on the 326th day.
2 - on the 330th day.
47 - from the 340th to the 350th day.
25 - from the 350th to the 360th day.
21 - from the 360th to the 377th day.
1 - on the 394th day.

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This gives a latitude in the time of gestation of 83 days; and the following observation may be made respecting cows and mares; namely, that more of the first brought forth before the completion of the ninth month, than of the second before that of the eleventh.

3. Sows.

Of these only fifteen were observed.
1 brought forth young, which lived, on the 109th day; that is, 3 months and 19 days.
10 - from the 110th to the 120th day.
2 - on the 121st day.
1 - on the 122d day.
1 - on the 123d day.

15

Consequently the difference between the two extremes was 14 days.

4. Rabbits.

One hundred and thirty-nine were observed during the course of three years.

1	brought forth on the 26th day.
2	— on the 27th day.
3	— on the 28th day.
53	— on the 29th day.
50	— on the 30th day.
21	— on the 31st day.
9	— on the 33d day.

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The difference between the two extremes in these animals was seven days.

IMPORTANT DISCOVERY.

Mr. Aaron Hannum, a respectable citizen of this county, has discovered a sovereign remedy for the expulsion of worms from children. The remedy is simple, and one that can be obtained at all seasons of the year. The following are a few particulars as related to us. He says, while several of his children were going to their grandmother's in April last, on a visit, they for amusement, took from the leaves or twigs of the cedar trees, what is generally called the cedar apple or knot. One of them, who had been always very much afflicted with worms since the age of two years, (now between six and seven,) and every thing had been done in the power of a skilful physician for their expulsion, but all to no effect, and who was in a very delicate state of health, eat several of the apples—the consequence was, that several worms were expelled from her. The remedy was again administered, and in twelve hours three hundred and upwards came from her. Mr. H. to be satisfied of its efficacy, gave the apples to five of his children, who were all in good health; it had the same effect as upon the first. He also eat several of the apples himself, and the effect was the same. Thus, through the medium of mere chance, perhaps one of the best remedies and the most simple has been discovered. Mr. H. makes the above public with a view to benefit his fellow citizens; an act, in our opinion, truly praiseworthy and magnanimous. He recommends to those who feel disposed to try the experiment, that the apples should be eaten nine mornings in succession, fasting; if dry, to be pounded fine, and taken in molasses, or eat them just as they come from off the tree. At this season of the year, the apples or knots are to be found in great abundance on the cedar trees.

[Upland (Pa.) Union, June 13.

Cow House.

There is now erecting at Edinburgh the most splendid cow house in the world. The buildings which compose the dairy form an additional ornament even to the "city of palaces." They are erected of fine white stone, and present a handsome front of three stories in the centre, surmounted with a dome, and of two stories in wings. The dome gives air and light to the cow house, which is one hundred and twenty feet in length, and sixty feet in breadth. The roof is twenty-one feet in height, and is supported by two rows of cast iron pillars. The whole is finished with as much neatness as a chapel, and the light from the sides is transmitted through handsome sashed windows, which would not disgrace a fashionable drawing room. At one end of this large apartment is a gallery, from whence the two hundred splendidly accommodated cows may be seen, and every arrangement is such, that, instead of a dirty and disgusting scene, it will be a very pleasant sight.

To give our readers some idea of the travel between this city and Troy, we have been politely

furnished with the following account of vehicles which passed the inn of Mr. David Nash, on Thursday last, coming to and going from Albany, viz: 51 stages, 25 hacks, 31 gigs, 53 double wagons, 90 single wagons—total 250 in one day, besides 27 saddle horses.

[Albany Daily Adv.

SCRAPS

From late English papers received at the office of the American Farmer.

It appears from City Accounts just printed, that out of monies amounting to 154,661*l.* provided for the building of New London Bridge, 132,530*l.* has already been expended, leaving a balance of 22,000*l.*

An importation of 23 Flemish horses, of the cart kind, were last week landed at Woodbridge; they appeared in fine condition, and 11 of them immediately found purchasers.

Among other literary curiosities destroyed by fire in the Basilican library at Constantinople, was a manuscript of the Iliad and Odyssey, written in letters of gold, upon a serpent's gut, 120 feet in length.

Russia is twice as big as Europe; it occupies the ninth part of the world anciently so called, and the 21th part of the surface of the globe.

As the rank of a person in Turkey is displayed by the costliness of his pipe, the price of them is carried to an enormous height, varying from twenty paras to twenty thousand piasters. The *jessamine techibouque* of the Capitan Pacha was adorned spirally with diamonds, from the amber mouth-piece along the whole length of the tube.

Notwithstanding the well known capriciousness of the English climate, it appears that the average heat experienced throughout the year, comparing one year with another, is very nearly the same. From the observations made since the establishment of the Royal Society, during upwards of one hundred years, it appears that the mean temperature of any one year, in the metropolis, in no instance, varied from that of the former year, in the metropolis, more than five degrees. Hence we may fairly conclude, that a mild winter will always follow a comparatively cold summer, and that when the summer has been unusually hot it will be succeeded by a cold winter.

The King of France has purchased a farm, which is to be a model to all the farms and farmers of France, and which is stocked with long fleeced sheep imported from England.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 30, 1826.

Meeting of the Trustees of the Maryland Agricultural Society.

A meeting was held agreeably to adjournment at Dalton, the residence of Doctor Allen Thomas—present G. Howard, of Waverly, president—R. Catton, G. Cook, Jacob Hollingsworth, J. B. Morris, David Williamson, Jr., Dr. Thomas, James Cox, Treasurer, and J. S. Skinner, Corresponding Secretary.

It was Resolved, That the next Cattle Show and Exhibition of household Manufactures be postponed until the autumn of 1827—and that James Carroll, Jr., D. Williamson, Jr., and J. S. Skinner, be a committee to prepare a scheme of premiums to be awarded at that time—the said scheme to be submitted to the consideration of the Board at their next meeting.

The next meeting of the Board of Trustees of the Maryland Agricultural Society, will be held at Mr. Jacob Hollingsworth's, on Thursday, the 20th July next.

At last we have had very refreshing and abundant showers of rain.—It is feared that it has been injurious to the harvesting of wheat crops. Corn which was in fine condition for receiving it, had not suffered by the drought; and if the remainder of the season should prove favourable, the crop of that great staple will be very large; and the more so, in this state, because a considerable portion of land, which had been designed for tobacco, was put in corn.

The late rains have fortunately not been so late, but that they will benefit the crop of oats: our fall markets too, will be greatly improved; and if farmers have recourse to sowing millet, broad cast corn, and we should suppose rye, with a view to straw, the deficiency of the hay and early root crops, may yet be in a great measure supplied.

THE LATE CATTLE SHOW.—Remarks upon by the Editor—continued.

ASSES AND MULES.

Well convinced of the great value and economy of the mule, the Trustees did not feel themselves at liberty to overlook these objects in forming their scheme of premiums; and accordingly very handsome ones were held out, to encourage the breeding of mules in the greatest perfection. They offered for the best Jack 20*£*—for the best Jennet 10*£*—for the best pair of well broken mules, raised in the state, 15*£*—for the best mule colt by the side of its dam, 5*£*. So little was their policy on this head appreciated, that but a single animal of this species was exhibited, and the Committee reported him "unworthy of a premium." Scarcely an instance can be found of a farmer ever voluntarily parting with a mule, who has experienced his hardiness, easiness of keep, long life, and great powers of endurance; yet few, very few in Maryland, take the necessary steps for rearing them. They rely, as in many other cases, on the people of other states, who possess more sagacity and industry, to supply them at a high price with mules which are reared as calves. They bear off our cash, and laugh at our folly and improvidence. We verily believe that mules, worth from 80 to 100, and that would work every day in the year for 25 years, and keep fat on two-thirds of a horse's rations, might be reared by almost every Maryland farmer for 15 or 20, until he was ready for the collar—yet there are scarcely fifty bred in a year in the whole state. But for all, "we are a wonderfully 'cute wise people!'"

NEAT CATTLE.

In this department of the Exhibition, the deficiency was lamentable. It may be said that scarcely any thing was contributed by a practical farmer, following that pursuit exclusively for a livelihood.

Suppose the fine animals sent by Henry Thompson, J. B. Morris, (one of the Trustees,) and Joseph Gales, of Washington, to have been withdrawn from the ground, and what would have become of this part of the "Cattle Show?" Yet these gentlemen may be called amateur farmers, who have recourse to the culture of the land, and take delight in the improvement of cattle, as an amusement, to which they would fain give more time and attention, if their cardinal pursuits and interests would allow them to follow their inclinations.

It cannot be pretended that farmers have not much at stake in all that appertains to the qualities and improvement of cattle—for beef, for work, for milk, for butter, tallow, leather, &c. &c., even their hoofs and horns, are turned to account. Independently of the pleasure of having improved animals economical in their keep, and proving well in the dairy or shambles, on the mere ground of profit and loss, experience shews that every farmer should possess himself at least of a male of superior value and the best blood. What has been their observation? Under their own eyes?

Colonel Powel, of Pennsylvania, has demand for many more than he can supply of Improved short horn bull calves, at \$200 each—and that after several years observation of their qualities, by a clear sighted, sagacious people, who know the why and wherefore of every thing they do. The bull Young Comet, from White Rose, bought, without a bid against him on our show ground for \$250, has been sold to one of the most enterprising farmers of New England, Mr. H. Watson, for \$500. Mr. Lloyd meets with ready sale for his half blood calves at \$25. Mr. Henry Thompson sold four animals of Devon blood, some only half bred, at the late Show, for \$350 cash.

The premiums offered for cattle were—

For the best bull over 2 years old, full blood improved Durham Short Horns, \$10
the best bull over 2 years old, full blood Devon, 10
the best bull over 2, full blood Alderney, 10
the bull, over 2 yrs. of any other breed, 10
the best bull, under 2 yrs. of any breed, 8
the best milch cow; certificate of her milking, quantity of butter produced, and keep for one week; and of the interval of time elapsed between her calving and the week of trial, to be produced, 15
the second best; particulars as above, 10
the third best, do. do. 5
the best heifer, of any breed, 10
the second best, 5
the best pair of well broke oxen, 10

Of these eleven premiums, it appears only six were bestowed, viz: For the best bull over 2 years, full blood Devon—the bull over 2 years, of any other breed—the best bull under 2 years, of any breed—the best milch cow—the best heifer, of any breed—the second best.

We might continue our reflections much in the same strain on other branches of the Exhibition, but the theme is not a pleasant one, and we willingly abandon the unwelcome task; not however without an acknowledgment of the great credit due to the gentlemen who filled some pens with sheep—the more especially as

The SHEEP were not only excellent of their several races, but sent, for the most part, from great distances, and by distinguished individuals. From Talbot county, fine specimens of successful ingrafting of the Merino and Bakewell blood upon the country stock, by Gov. Stevens—Southdowns that were highly admired for size, fleece, form, and evident hardness of constitution, procured by the judgment and kindness of Col. Powel, of Pa., for Col. Lloyd—Saxony Merinos of the finest qualities, imported by Mr. W. Patterson—the pure Merino by Gen. Mason, of Georgetown—and the prize ram, for the greatest quantity of picklock wool, sent all the way on purpose, in a wagon, from Steubenville, in Ohio, by the American CHAMPION of sheep husbandry, W. R. Dickinson, Esq.

WESTERN WHEAT.

Speculation, which gave a few weeks since a sudden advance to this article, it is now said has produced a depression equally as sudden. The Onondaga Register of the 14th inst. states, that the price of wheat on the canal was then 63 cents per bushel. It is quoted in New York at \$1.00 and \$1.12. Sales of the first quality western wheat were made in this city yesterday and the day before, at \$1.00; but the average price is several cents less. Western flour, prime brands, is selling at \$4.50.

[Albany paper, June 21.]

ANSWER TO INQUIRY—ST. ANTHONY'S FIRE.

DEAR SIR, Henderson, Ken., May 28, 1826.
To the inquirer in your Farmer some time since for some remedy for the unpleasant itching that accompanies the St. Anthony's fire, you may state

that the fresh leaves of the Jamestown weed, applied to the inflamed surface, produces immediate and effectual relief.

Respf^{ly}, yours, THO'S TOWLES.

ANSWER TO A FRIEND.

FRIEND SKINNER,
In reply to the letter thee sent us this morning, containing the inquiries of a subscriber who signs his letter "A Friend," we may inform, that we keep at all times most of the grass Seeds named in the following list, and of such quality as we can warrant to grow. The present prices are added, viz:

Highland meadow oat grass seed, per bush. \$6.00

on any land not wet.

Rye grass, (perennial,) do. do. 5.00

on any land not wet.

Orchard grass seed, do. do. 2.00

moist land not wet.

Timothy, do. do. 3.00

moist land not wet.

Herds', or red-top, do. do. 1.50

moist or wet land.

Red clover, do. do. 4.50

dry mellow land.

Sainfoin, do. do. 5.00

mellow land, stiff subsoil.

Spring and winter tares, do. do. 5.00

dry mellow or stiff soil.

White clover, per lb. 37½

mellow land or stiff.

Lucerne, do. do. 50

mellow land or stiff.

Thy friends,

SINCLAIR & MOORE.

TOBACCO—Few purchases are making—It may be said of this article in general terms, that the best qualities have fallen much more than the common tobacco.

That which at this time would bring about \$10, would at this season of last year have brought \$14—common tobacco, which would then have sold at \$6.50, would now, probably bring about \$5.—Sales lately, have been poor, and those chiefly of scattering hogsheds.

The price of grain, will be found in our regular price current.

Amount of Inspections in the three State Warehouses during the last week—439 hhd.

WANTED,

A Manager to conduct a Farm and overlook about fifteen working hands, in that healthy portion of Tennessee bordering on Upper Virginia. As there is on the farm a large dairy and several looms to be superintended, it is desirable that the person engaging to manage the farm, should have a wife capable of attending to these concerns. To a person accustomed and well qualified to manage a farm cultivated by slave labour as above, a good situation will be referred on application to the Editor. June 30.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	7 50	8		
BACON, and Hams, . .	lb.	5	9	9	12
BEEF-WAX, Am. yellow	—	31	33		50
COFFEE, Java,	—	17	17½	22	25
Havana,	—	15	15½		20
COTTON, Louisiana, &c.	—	12	13		
Georgia Upland, . . .	—	10	11		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	14	16	18
Dipt,	—	10	11		14
CHEESE,	—	10	12	12	15
FEATHERS, Live, . . .	—	30	31	37	
FISH, Herrings, Sus.	bbl.	2 37	2 50		
Shad, trimmed, . . .	—	7 00			
FLAXSEED, Rough, . .	oush	75		87½	
FLOUR, Superfine, city,	bbl.	4 37	4 50	5 00	
Fine,	—	4 00	4 50		
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	75	80		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler,	—	75	85		
do. Red,	—	90	96		sales
Rye,	—	68	70		
Barley,	—	80			
Clover Seed, Red . . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . . .	lb.	1		2 00	
Orchard Grass Seed, .	bush	1 75		1 50	
Mangel Wurtzel Seed,	—	1 25		3 00	
Timothy Seed,	—	2 25			
Oats,	—	66			
Beans, White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	15		25	
HOGS' LARD,	—	7	9	12	
LEAD, Pig	lb.	6½		8½	
Bar	—	8		8½	
LEATHER, Seal, best,	—	23	24	62	
MOLASSES, sugar-house	gal.	46		62½	75
Havana, 1st qual. . .	—	31	32	37½	
NAILS, 6x20d.	lb.	64		9	
NAVAL STORES, Tar,	bbl.	1 37½	1 50		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	31	33	40	
Spermaceti, winter .	—	70	75	88	
PORK, Baltimore Mess,	bbl	11 00	12 00		
do. Prime,	—	8 00	9 50		
PLASTER, cargo price,	ton.	4 00			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	7½	8	12
WHISKEY, 1st proof, .	gal.	28½	30	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	36		50	
SUGARS, Havana White,	c. lb.	13	13 50	15	16
do. Brown,	—	9 00	9 50		
Louisiana,	—	7 75	9 50	10	23
Loaf,	lb.	19	22	20	
SPICES, Cloves, . . .	—	70	75	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	16		25	
SALT, St. Ubes,	bush	43	75		
Liverpool ground . .	—	45		75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 15	1 20	2 00	
Lisbon,	—	1 15	1 20	1 50	1 75
Claret,	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		unwash
Common, Country, . .	—	15	20		but
Skinners' or Pulled, .	—	20	25		

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AGRICULTURE.

THOUGHTS ON AGRICULTURE.

(From the Visitor, 1756.)

Agriculture, in the primeval ages, was the common parent of traffick; for the opulence of mankind then consisted in cattle, and the product of tillage; which are now very essential for the promotion of trade in general, but more particularly so to such nations as are abundant in cattle, corn, and fruits. The labour of the farmer gives employment to the manufacturer, and yields a support for the other parts of a community: it is now the spring which sets the whole grand machine of commerce in motion; and the sail could not be spread without the assistance of the plough. But, though the farmers are of such utility in a state, we find them in general too much disregarded among the politer kind of people in the present age; while we cannot help observing the honour that antiquity always paid to the profession of the husbandman: which naturally leads us into some reflections upon that occasion.

Though the mines of gold and silver should be exhausted, and the species made of them be lost; though diamonds and pearls should remain concealed in the bowels of the earth, and the womb of the sea; though commerce with strangers be prohibited; though all arts, which have no other object than splendour and embellishment, should be abolished; yet the fertility of the earth alone would afford an abundant supply for the occasions of an industrious people, by furnishing subsistence for them, and such armies as should be mustered in their defence. We, therefore, ought not to be surprised, that agriculture was in so much honour among the ancients: for it ought rather to seem wonderful that it should ever cease to be so, and that the most necessary, and most indispensable of all professions, should have fallen into any contempt.

Agriculture was in no part of the world in higher consideration than Egypt, where it was the particular object of government and policy: nor was any country ever better peopled, richer, or more powerful. The satrapæ, among the Assyrians and Persians, were rewarded, if the lands in their governments were well cultivated; but were punished, if that part of their duty was neglected. Africa abounded in corn; but the most famous countries were Thrace, Sardinia, and Sicily.

Cato, the Censor, has justly called Sicily the magazine and nursing mother of the Roman people, who were supplied from thence with almost all their corn, both for the use of the city, and the subsistence of her armies: though we find in Livy, that the Romans received no inconsiderable quantity of corn from Sardinia. But, when Rome had made herself mistress of Carthage and Alexandria, Africa and Egypt became her store houses: for those cities sent such numerous fleets every year, freighted with corn to Rome, that Alexandria alone annually supplied twenty millions of bushels; and when the harvest happened to fail in one of those provinces, the other came in to its aid, and supported the metropolis of the world; which, without this supply, would have been in danger of perishing by famine. Rome actually saw herself reduced to this condition under Augustus; for there remained only three days' provision of corn in the city: and that Prince was so full of tenderness for the people, that he had resolved to poison himself, if the expected fleets did not arrive before the expiration of that time; but they came, and the preservation of the Romans was attributed to the good fortune of their Emperor: but wise precautions were taken to avoid the like danger for the future.

When the seat of empire was transplanted to Constantinople, that city was supplied in the same

manner: and when the Emperor Septimus Severus died, there was corn in the publick magazines for seven years, expending daily 75,000 bushels in bread for 600,000 men.

The ancients were no less industrious in the cultivation of the vine than in that of corn, though they applied themselves to it later: for Noah planted it by order, and discovered the use that might be made of the fruit by pressing out and preserving the juice. The vine was carried by the offspring of Noah into the several countries of the world: but Asia was the first to experience the sweets of this gift; from whence it was imparted to Europe and Africa. Greece and Italy, which were distinguished in so many other respects, were particularly so by the excellency of their wines. Greece was most celebrated for the wines of Cyprus, Lesbos, and Chio; the former of which is in great esteem at present: though the cultivation of the vine has been generally suppressed in the Turkish dominions. As the Romans were indebted to the Grecians for the arts and sciences, so were they likewise for the improvement of their wines; the best of which were produced in the country of Capua, and were called the Massick, the Calenian, Formian, Cæcuban, and Falernian, so much celebrated by Horace. Domitian passed an edict for destroying all the vines, and that no more should be planted throughout the greatest part of the west; which continued almost two hundred years afterwards, when the Emperor Probus employed his soldiers in planting vines in Europe, in the same manner as Hannibal had formerly employed his troops in planting olive trees in Africa. Some of the ancients have endeavoured to prove, that the cultivation of vines is more beneficial than any other kind of husbandry: but, if this was thought so in the time of Columella, it is very different at present; nor were all the ancients of his opinion, for several gave the preference to pasture lands.

The breeding of cattle has always been considered as an important part of agriculture. The riches of Abraham, Laban, and Job, consisted in their flocks and herds. We also find from Latinus in Virgil, and Ulysses in Homer, that the wealth of those princes consisted in cattle. It was likewise the same among the Romans, till the introduction of money, which put a value upon commodities, and established a new kind of barter. Varro has not disdained to give an extensive account of all the beasts that are of any use to the country, either for tillage, breed, carriage or other conveniences of man. And Cato, the Censor, was of opinion, that the feeding of cattle was the most certain and speedy method of enriching a country.

Luxury, avarice, injustice, violence and ambition take up their ordinary residence in populous cities; while the hard and laborious life of the husbandman will not admit of these vices. The honest farmer lives in a wise and happy state, which inclines him to justice, temperance, sobriety, sincerity, and every virtue that can dignify human nature. This gave room for the poets to feign, that Astræa, the goddess of justice, had her last residence among husbandmen, before she quitted the earth. Hesiod and Virgil have brought the assistance of the muses in praise of agriculture. Kings, generals, and philosophers, have not thought it unworthy their birth, rank, and genius, to leave precepts to posterity upon the utility of the husbandman's profession. Hiero, Attalus, and Archelaus, kings of Syracuse, Pergamus, and Cappadocia, have composed books for supporting and augmenting the fertility of their different countries. The Carthaginian general, Mago, wrote twenty-eight volumes upon this subject; and Cato, the Censor, followed his example. Nor have Plato, Xenophon, and Aristotle, omitted this article, which makes an essential part of their politics. And Cicero, speaking of the writings of Xenophon, says, "How fully and excellently does

he, in that Book called his *Oeconomicks*, set out the advantages of husbandry, and a country life."

When Britain was subject to the Romans, she annually supplied them with great quantities of corn; and the Isle of Anglesea was then looked upon as the granary for the western provinces: but the Britons, both under the Romans and Saxons, were employed like slaves at the plough. On the intermixture of the Danes and Normans, possessions were better regulated, and the state of vassalage gradually declined, till it was entirely wore off under the reigns of Henry VII. and Edward VI., for they hurt the old nobility by favouring the Commons, who grew rich by trade, and purchased estates.

The wines of France, Portugal, and Spain, are now the best; while Italy can only boast of the wine made in Tuscany. The breeding of cattle is now chiefly confined to Denmark and Ireland. The corn of Sicily is still in great esteem, as well as what is produced in the northern countries: but England is the happiest spot in the universe for all the principal kinds of agriculture, and especially its great produce of corn.

The improvement of our landed estates, is the enrichment of the kingdom: for, without this, how could we carry on our manufactures, or prosecute our commerce? We should look upon the English farmer as the most useful member of society. His arable grounds not only supply his fellow subjects with all kinds of the best grain, but his industry enables him to export great quantities to other kingdoms, which might otherwise starve; particularly Spain and Portugal: for, in one year there have been exported 51,520 quarters of barley, 219,731 of malt, 1920 of oat meal, 1329 of rye, and 153,343 of wheat; the bounty on which amounted to 72,433 pounds.

What a fund of treasure arises from his pasture lands, which breed such innumerable flocks of sheep, and afford such fine herds of cattle, to feed Britons, and clothe mankind! He rears flax and hemp for the making of linen; while his plantations of apples and hops supply him with generous kinds of liquors.

The land-tax, when at four shillings in the pound, produces 2,000,000 pounds a year. This arises from the labour of the husbandman: it is a great sum: but how greatly is it increased by the means it furnishes for trade?

Without the industry of the farmer, the manufacturer could have no goods to supply the merchant, nor the merchant find employment for the mariners: Trade would be stagnated; riches would be of no advantage to the great; and labour of no service to the poor.—

The Romans, as historians all allow,
Sought, in extreme distress the rural plough;
To triumph! for the village swain
Retir'd to be a nobleman again.

USING MARSH MUD FOR MANURE,

"*Cotton Seed and so forth,*" the fruits of ten years practical experience.

MR. SKINNER,

Sir—In the fall of the year 1818—pretty late in the fall too, (I shall be as concise as possible,) I had a small field containing about 4 acres, adjoining a swamp, not then and not yet "drained and cleared." This field, if I may use the term, was the very essence of sterility, and under the best culture hitherto had produced nothing but sassafras bushes, hog weeds and maycocks, &c. what Dr. Mitchell would very properly call the "*passiflora cerulea*." I say this field I was determined to make a bold push to improve, for the sake of setting off my farm on the "country high road side."

* *Cincinnati*.

The plan proposed was short, decisive, availing, and what every one may do likewise. A strong well made horse cart and a good mule were provided, and delivered into the hands of two young men, with a spade for each. Thus provided, and the very poor miserable sterile silicious 4 acres "checked off," as we call it—the "boys set to work—Dick and Tom," rolled up their breeches above their knees—went into the hitherto useless bog, and constantly carted out heavy blue mud, the compost of nature and ages, and such as Earl Stimpson, nor any one may hope to equalize in stercoraries and the like. A half a bushel at least of this compost of nature was thrown from the cart on each check, as we call it, and there suffered to lie and rot, and be acted on by frost, through the months of December, January, February, March, and until the 18th day of April, 1819, (I keep memorandum books.) The surrounding sand was hauled on top of the blue compost, and two or three of the good old Indian were deposited in the same. Its growth was immediate, rapid, vigorous, and products wonderful indeed.

A part of the adjoining land, of the same quality, (but not manured in this way,) was planted in the same way—but although it flourished some at first, and promised well even to the end of May, yet when the sun began to shine intensely hot, as it does with us in July and the other summer months, the corn began to fade and lose its natural green for the more brilliant colour of the ruta baga and pumpkin. The summer evenings' thunder showers fell in vain on this unfruitful soil, in which nought was congenial but the sassafras, the hog weed and the passiflora: it was abandoned as of "no avail," until further riches were drawn from the swamp—which, if we will not "drain and dry," let us draw manure from in this way. These swamps are the banks which hold all the valuable effects of their neighbours, the hills, which lift their heads in my country with such "majestic poverty." The value of cotton seed as a manure, in another, when my "hand and head" are more in tune.

A SWAMPER OF CAROLINA.

P. S. I forgot to mention the great surprise expressed by the "truly court-going neighbours" at the great change effected in the old "sassafras commons"—all of which I told them I had drawn (I mean the idea of using swamp mud,) from the truly valuable American Farmer.

REMARKS ON THE CONSTRUCTION AND MANAGEMENT OF CATTLE YARDS.

BY J. BUEL, OF ALBANY.

Vegetables, like animals, cannot thrive or subsist without food; and upon the quantity and quality of this depends the health and vigour of the vegetable, as well as of the animal. Both subsist upon animal and vegetable matter; both may be surfeited with excess; both may be injured by food not adapted to their habits, their appetites, or their digestive powers. A hog will receive no injury, but great benefit, from free access to a heap of corn or wheat, where a horse or cow will be apt to destroy themselves by excess. The goat will thrive upon the boughs and bark of trees, where the hog would starve. The powerful robust maize will repay, in the increase of its grain, for a heavy dressing of strong dung; for which the more delicate wheat will requite you with very little but straw. The potato feeds ravenously, and grows luxuriantly, upon the coarsest litter; while many of the more tender exotics will thrive only on food upon which fermentation has exhausted its powers. But here the analogy stops: for while the food of the one is consumed in a sound, healthy, and generally solid state, the food of the other, before it becomes aliment, must undergo the process of putre-

faction or decomposition, and be reduced to a liquid or æriform state.

I have gone into the analogy between animals and vegetables thus far, to impress upon the minds of our farmers the importance of saving, and of applying, the food of their vegetables with the same care and economy that they do the food of their animals. How scrupulously careful is the good husbandman of the produce of his farm, destined to nourish and fatten his animals; and yet how often careless of the food which can alone nourish and mature his plants! While his fields are gleaned, and his grain, hay and roots carefully housed, and economically dispensed to his animals, the food of his vegetables is suffered to waste on every part of his farm. Stercoraries we have none. The urine of the stock, which constitutes a moiety of the manure of animals, is all lost. The slovenly and wasteful practice of feeding at stacks in the fields—where the sole of the grass is broken, the fodder wasted, and the dung of little effect, is still pursued. And finally, the little manure which does accumulate in the yards, is suffered to lay till it has lost full half its fertilizing properties, or rotted the sills of the barn; when it is injudiciously applied, or the barn removed to get clear of the nuisance. Again—none but a slothful farmer will permit the flocks of his neighbours to rob his own of their food; yet he often sees, but with feeble efforts to prevent it, his plants smothered by pestiferous weeds, and plundered of the food which is essential to their health and vigour. *A weed consumes as much food as a useful plant.* This, to be sure, is the dark side of the picture; yet the original may be found in every town, and in almost every neighbourhood.

Is it surprising, that under such management, our arable grounds should grow poor, and refuse to labour its accustomed reward? Can it be considered strange, that those who thus neglect to feed their plants, should feel the evil of light purses, as well as of light crops? Constant draining or evaporation, without returning any thing, would in time exhaust the ocean of its waters. A constant cropping of the soil, without returning any thing to it, will in like manner exhaust it of its vegetable food, and gradually induce sterility. Neither sand, clay, lime or magnesia—which are the elements of all soils—nor any combination of part or all of them, is alone capable of producing healthy plants. It is the animal and vegetable matter accumulated upon its bosom, or which art deposits there—with the auxiliary aid of these materials diffused in the atmosphere—that enables the earth to teem with vegetable life, and yield its tribute to man and beast.

I will now suggest a cheap and practicable mode of providing food for vegetables, commensurate to the means of every farmer of ordinary enterprise; and that my suggestions may not be deemed theoretical, I will add, that I "practise what I preach."

The cattle-yard should be located on the south side of, and adjoining the barn. Sheds, substantial stone walls, or close board fences, should be erected at least on the east and west sides, to shelter the cattle from cold winds and storms—the size proportioned to the stock to be kept in it. Excavate the centre in a concave form, placing the earth removed upon the edges or lowest sides, leaving the borders ten or twelve feet broad, and of a horizontal level, to feed the stock upon, and from two to five feet higher than the centre. This may be done with a plough and scraper, or shovel and handbarrow, after the ground is broken up with the plough. I used the former, and was employed a day and a half, with two hands and a team, in fitting two to my mind. When the soil is not sufficiently compact to hold water, the bottom should be bedded with six or eight inches of clay, well beat down and covered with gravel or sand. This last labour is seldom required, except where the ground is very porous. My yards are constructed on a sand

loam, resting on a clay subsoil. Here should be annually deposited, as they can be conveniently collected, the weeds, coarse grass, and brake of the farm; and also the pumpkin vines and potato tops. The quantity of these upon a farm is very great, and are collected and brought to the yard with little trouble by the teams returning from the fields. And here also should be fed out, or strewed as litter, the hay, stalks and husks of Indian corn, pea and bean haulm, and the straw of grain not wanted in the stables. To still further augment the mass, leached ashes and swamp earth may be added to great advantage. These materials will absorb the liquid of the yard, and, becoming incorporated with the excrementitious matter, double or treble the ordinary quantity of manure. During the continuance of frost, the excavation gives no inconvenience; and when the weather is soft, the borders afford ample room for the cattle. In this way the urine is saved, and the waste incident to rains, &c. prevented. The cattle should be kept constantly yarded in winter, except when let out to water, and the yard frequently replenished with dry litter. Upon this plan, from ten to twelve loads of unfermented manure may be obtained every spring for each animal; and if the stable manure is spread over the yard, the quality of the dung will be improved, and the quantity proportionably increased. Any excess of liquid that may remain after the dung is removed in the spring, can be profitably applied to grass, grain or garden crops. It is used extensively in Flanders, and in other parts of Europe.

Having explained my method of procuring and preserving the food of vegetables, I will proceed to state my practice in feeding or applying it. It is given, every spring, to such hoed crops as will do well upon coarse food, (my vegetable hogs and goats.) These are corn, potatoes, ruta baga, beans and cabbages. These consume the coarser particles of the manure, which would have been lost during the summer in the yard; while the plough, harrow and hoe eradicate the weeds which spring from the seeds it scatters. The finer parts of the food are preserved in the soil, to nourish the small grains which follow. The dung is spread upon the land as evenly as possible, and immediately turned under with the plough. It is thereby better distributed for the next crop, and becomes intimately mixed and incorporated with the soil by subsequent tillage. Thus, upon the data which I feel warranted in assuming, a farmer who keeps twenty horses and neat cattle, will obtain from his yards and stables, every spring, 200 loads of manure, besides what is made in summer, and the product of his hogsty. With this he may manure annually ten or twelve acres of corn, potatoes, &c. and manure it well. And if a proper rotation of crops is adopted, he will be able to keep in good heart, and progressively to improve, sixty acres of tillage land, so that each field shall be manured once every four or five years, on the return of the corn and potato crop.

SHEEP SHEARING.

(From the Nantucket Inquirer of June 24.)

This patriarchal festival was celebrated on Monday and Tuesday last in this place, with more than ordinary interest. For some days previous, the sheep drivers have been busily employed in collecting from all quarters of the island, the dispersed members of the several flocks; and committing them to the great sheepfold, about two miles from town, preparatory to the ceremonies of ablution and de-vestment.

The principal inclosure contains 300 acres; towards one side of this area, and near the margin of a considerable pond, are four or five circular fences—one within the other—like Captain Symmes' concentric curve—and about 20 feet apart, forming

sort of labyrinth. Into these circuits the sheep are gradually driven, so as to be designated by their ear-marks, and secured for their proper owners in sheepcotes arranged laterally, or nearly so, round the exterior circle. Contiguous to these smaller pens, each of which is calculated to contain about one hundred sheep, the respective owners had erected temporary tents, wherein the operation of shearing was usually performed. The number of hands engaged in this service, may be imagined from the fact, that one gentleman is the owner of about 1000 sheep, another of 700, and numerous others of smaller flocks, varying in numbers, from 3 or 400 down to a single dozen. The business of selecting, seizing and yarding the sheep, creates a degree of bustle that adds no small amusement to the general activity of the scene. The whole number of sheep and lambs brought within the great inclosure, is said to be 16,000. There are also several large flocks commonly sheared at other parts of the island.

MR. WATSON'S SHEEP SHEARING.

Henry Watson, Esq., of East Windsor, invited his friends to be present at the finishing of his sheep shearing, on Wednesday last. A large number of agricultural gentlemen from Massachusetts had the pleasure of seeing and examining as good sheep, as good stock, as good a dinner, as good wine, and in short as good rural management, as they could wish. The farming interest in this country is taken hold of by gentlemen of wealth, zeal and experience, and at Mr. Watson's table there was an array of some of the most intelligent landholders to be found in New England. We cannot now insert the particulars, nor even the toasts.

[Con. Mirror.]

TREATMENT FOR SEED WHEAT.

A wealthy retired Somersetshire farmer asserts, that for thirty-three years he treated his seed wheat in the following manner, and always grew good crops, exempt from smut or blight. He collected as many half bushels of sheep's dung, as he intended to sow quarters of wheat; as much of the dung placed in a cooler, or other large tub, as the quantity of wheat allotted to it, and sixteen gallons of water, and four gallons of pork or other brine, of sufficient strength to swim an egg, would permit. The brine and water he put together in a copper or furnace, and made it scalding hot—in which state he poured it into the vessel that contained the dung, covering the former sufficiently close with sacks, to prevent as much as possible, the steam from evaporating. When the compound had become sufficiently cool to admit of the operation, he had the sheep's dung rubbed, by hand, till it was entirely dissolved; and then, whilst the liquid was still lukewarm, he infused the wheat which remained in soak, closely covered, for thirty six hours—at the expiration of which, it was taken out of the liquid, placed in strainers, and as soon as it had done dripping, spread on the floor of a barn or granary, after the manner of malt on the floor of a malt house, frequently turning it till nearly dry, well powdering it, whilst a little damp, with finely pulverized lime.

FOOD FOR CATTLE.

The Philadelphia Gazette says: "It is now a time of considerable distress among the owners of horses and cattle, for food; and we understand that hay is selling for \$30 per ton; oats, weighing 30 lbs. per bushel, 70 to 75 cents, being about 2½ cents per lb.; and other cattle food in about the same proportion. It might be well for the feeders of cattle to know that superfine flour can be had now for about 2½

cents per lb., and it is certain one pound of it contains as much nourishment as two pounds of oats, and if used with judgment, is much the cheapest cattle food now in market! It may be important to cattle owners to look to this subject."

[N. Y. Statesman.]

HORTICULTURE.

CABBAGES, PEAS, ASPARAGUS, FRUIT, &c.

DEAR SIR,

New York, June 28, 1826.

The observations contained in the enclosed communications, appear to me to merit a place in the American Farmer.

Under the impression that they will prove of practical utility to the horticulturist, I submit them to your consideration.

I am, dear sir, respectfully, yours,

DAVID HOSACK.

J. S. SKINNER, Esq.,

Editor American Farmer, Baltimore.

DEAR SIR,

Salem, February 7, 1826.

Your inaugural discourse, delivered before the New York Horticultural Society, which you kindly sent me, embracing subjects with which I have some acquaintance—you will permit me to make my acknowledgments, by communicating to you a few observations, the result of my experience and information. They may be of some use to gentlemen who, being in situations to raise their own vegetables, must desire to have them of the most delicate flavour, for the gratification of themselves, their families and friends.

The object of the market gardener is, to raise the greatest quantity, on a given space of ground. He, therefore, is very liberal in the application of manure, which is furnished most abundantly from the stables of the towns which they supply with vegetables. These will be large and handsome, and meet with a ready sale: while, in my estimation, a vast portion of them are fit only for domestic animals. During the many years I resided in Philadelphia, I seldom tasted a cabbage; having, after many trials, found that vegetable ill-flavoured, sometimes even to rankness. For the same reason, I became indifferent to asparagus; and sometimes wholly rejected it, because ill-flavoured, from the too ample use of rank stable manure. I never tasted a good muskmelon that was raised in a hot bed, and forced to ripeness by stable manure. Some, indeed, have been so ordinary that I have forborne to partake of them. Yet I am not squeamish. With a firm constitution and vigorous health, I could at any time subsist on the coarsest and meanest food.

Upwards of fifty years ago, an observing townsman of mine gave me the following information. He took two cabbages, one of which was raised in his garden, manured every spring from his stable, the other in an open, airy field moderately manured. The two cabbages were boiled in separate pots; and the water, as he had directed, remained in the pots till the next morning. That in which the field cabbage grew was sweet; the other rank and disgusting. Leaving out of the question the matter of taste, which cabbage would you pronounce most wholesome?

I discriminate among culinary vegetables. Those which are the immediate offspring of the rank soil, as cabbages, cauliflowers, and asparagus, will suffer contamination: while green peas, on the same soil, may please the palate. But the food of peas gives growth first to the vine; from the vine, the sap passes by a slender neck of fine strainers, and forms the pod; from the pod, each pea, by a neck still more slender, and doubtless still finer strainers, receives its growth; and thus purified, (perspiration

going on during all these processes,) becomes a grateful food. Yet even green peas would be more delicious, if grown on a soil sufficiently rich by the application of other manures, or of which the rankness had been dissipated during the growth of some other crop in the preceding year. In the year 1787 I went to live at Wyoming, now Wilkesbarre. I had purchased a lot which had not been cropped for many years, and probably never manured. The tender turf was turned under with a spade, and so completely, that not a blade of grass appeared on the surface. In the first week in May, early Charlton and green marrowfat peas were planted, in beds side by side. The first produced very fine green peas; but the marrowfats were superlatively delicate and rich. Some peas of each sort ripened on the vines; and were saved to plant the ensuing year. These gave me unlooked for, but important information. In the spring of 1788, I took both parcels into my garden to plant. Opening the little bag of early Charltons, I found them, as I had expected, swarming with bugs; but I knew that the germs of buggy peas were not destroyed. I then opened the bag of marrowfats, where, to my surprise, there was not a single bug. I recollected that the marrowfat vines of the preceding year, furnished no peas until the early Charltons were gone. The inference was obvious: the flight of the pea-bug—the season for depositing its eggs—was passed before the pods of the marrowfats were formed. This fact furnished me with a rule for sowing the common white field pea, the same year. I delayed sowing until the latter part of May; and harvested a crop of ripe peas perfectly free from bugs. The next year, I repeated the same experiment, and with the same success. But these crops were small; for the land was poor, and the extreme heat of June in that vale (latitude 41° 13') pinched the vines. The third year, I chose a piece of good and moist intervale, or bottom land, and which yielded a full crop, and free from bugs.

About thirty years ago, I went to see the garden of Mr. Clifton, near the Navy yard, Philadelphia. It abounded in various fruits—plums, peaches, currants, gooseberries, &c. Seeing several sorts of gooseberry bushes loaded with fruit, and all growing in the shade of fruit trees—I asked Mr. Clifton, if a more open exposure would not be better? He answered—"Gooseberries love the shade." Mr. Clifton was then an old man, of much experience in gardening. At a subsequent period, learning that Lancaster county, in England, surpassed all other parts of the island, in the variety and excellence of its gooseberries, Mr. Clifton's remark occurred to me: and I supposed that in the shade, in a Philadelphia garden, the air would be even warmer than the atmosphere of Lancashire. After my return to Massachusetts, I obtained one sort of Mr. Clifton's gooseberries, and planted them in my garden; and near them stuck a few slips of ozier, which I had brought from New Jersey, intending to remove them in a year or two; but I neglected them. They grew luxuriantly, and buried the gooseberries in their shade, and among some of their vigorous shoots: yet the gooseberries were much superior to what they were afterwards, when the oziers were removed.

Your horticultural address suggested several other things, which I may communicate, when I find leisure. In the mean time, I remain,

Dear sir,

Your obliged and obed't serv't,

T. PICKERING.

DR. DAVID HOSACK.

[*In Levington's ample treatise on the culture of the gooseberry published in the present volume, Nos. 4 and 5, of the American Farmer, he recommends that care be taken not to exclude "the free air and reviving sun."

From A. E. Belknap, Esq., of Boston.

Dear Sir.—Concerning the operation on fruit trees, of which I spoke to you, I have collected the following information:

An incision should be made on the limb of a tree at a few inches from the trunk, and the bark taken off all round the limb for the width of one quarter or one third of an inch without injuring the wood. The operation should be performed in the spring, when the sap has risen so that the bark will peel easily. The limb so operated on thrives better, and the fruit it produces is superior to that on the common branches. It is peculiarly useful for trees which are barren, or which do not bring their fruit to maturity. The wound cicatrizes after a while.

This experiment, I am told, is not novel: it has succeeded at Judge Jay's, in this State, and in the garden of Mr. Petit de Villiers, at Savannah. It is very dissimilar to the method of cutting off the main stem or pivot of fruit trees by which a greater proportion of nourishment is thrown into the branches.

I am, with respect, dear sir,

Your obed't serv't,

DR. D. HOSACK.

A. E. BELKNAP.

LADIES' DEPARTMENT.

NUTRITION—FOOD.

(Continued from p. 117.)

From these results, it appears to be conclusive, that cow's milk during the first days after her having calved, includes much in its nature, essentially dissimilar from what is secreted by the same animal at a later period: that such milk is remarkably distinguished by its viscous and albuminous characters; and, that it affords a very large proportion of butter. These peculiarities commence disappearing in a few days; but it is generally more than two months before milk undergoes the last transition of which it is susceptible.

The same law of their vital constitution which determines these changes in other animals, operates also on the fluid elaborated for similar purposes, in the breasts of the human female. This, at the time of her infant's birth, is thin, mild, and sweetish: it is adapted, the best of all things, to allay the excessive sensibility of the young one, and to expel the meconic deposition, in due time, from its bowels. For this purpose, it is requisite that the child be put very early to the breast; because so soon as the "milk fever" begins, the milk itself commences passing through its natural alterations.

Great differences are observable in the quantity of its milk when a suckling female is fasting, especially if the fast has been long, and when she has recently taken food. From this fact results the conclusion, that the elements of the milky fluid are very sensibly affected by variety in the quantity and quality of the food itself, and also in the intervals between exhibiting it. Cows accustomed to graze in moist meadows covered with rushes and sedges, yield milk in great profusion; but it is thin and insipid: the butter taken from it, moreover, has a suety appearance and is very soft. If, however, the animals be sent to depasture dry champaign fields or open woodlands, their milk soon becomes more sapid, and its butter firmer, although the atmospheric temperature in which they feed be the same, under both circumstances.

Females of the bestial tribes, which subsist on food composed of animal and vegetable substances whose proportions are perpetually varying, have their milk on that account, more susceptible of being modified by the nature of such aliment. Let a suckling bitch be made to live for eight days on vegetable nourishment alone, and its milk will readily undergo spontaneous separation;—be coagulable by the ordinary means; yield a larger propor-

tion of cream and curd than that of the goat, and, indeed, appear to have acquired all the properties of what is secreted by the ruminating animals. Let, on the other hand, the same bitch be fed solely with raw flesh, and the quantity of her milk shall be observably diminished; shall resist spontaneous coagulation; and, instead of the acidulous, present true alkaliescent properties. If such modifications are determinable in the milk of inferior animals by the sole agency of food, what then must be the extent of its influence on that of the human female whose diet is so variable and so complicated, and who herself is exposed, at all times to the operation of innumerable other causes possessing tendency to occasion equally injurious effects?—Reflection on this indisputable fact suggests an explanation of the different results which have occurred to chemists in their researches into the nature of human milk:—and, it additionally suggests the necessity of suckling mothers attentively combining in their own diet such alimentary substances as are known to enrich the milky sustenances of their babes.

Mental affections,—grief, gladness; anger, fear; and indeed all the passions,—deteriorate the qualities of human milk, in a very direct and remarkable manner. Sometimes, on experiencing strong or sudden emotions, females giving suck have their breasts in a short time become shrunk and flabby, and the secretion of their milk altogether suspended. Ebriety and anger not only determine the last-mentioned result, but alter the natural properties of the milk itself, make it prejudicial to the nursing's health, and thereby excite sharp pains in the bowels, or not unfrequently the most distressing nervous agitations. An infant was abruptly seized with alarming convulsions when sucking its nurse, who had just been ill-used and even whipped by her employers, for a very venial fault. Equanimity and happiness, therefore, are as indispensably requisite to the suckler of a babe, as the influences of wholesome food and salubrious air;—and, parents should never cease to appreciate the importance of guarding themselves and nurses from being exposed to sustain the impressions of melancholy, affective, and painful sensations.

Disease, in all its forms, acts with very ungenial influence on the secretion of human milk. In acute maladies, it is either considerably diminished or altogether suspended; but the exact modifications determined, by this means, in its constitutional elements, have not been analytically ascertained. Nurses who are subject to nervous seizures have their milk become transparent and ropy as the white of an egg, at every time an accession of their complaint supervenes; but, in a few hours after the height of such paroxysms, it gradually regains its ordinary characters. Milk of a cow, whose lungs were nearly destroyed by tuberculous consumption, was found to contain a remarkable proportion of the phosphate of lime. If this fact be constant in all the mammiferous animals affected with tubercles in the organs of respiration,—and if it shall be known to exist in phthysical women giving suck to infants,—it is an important fact, and one that ought to engage the serious attention of physicians and physiologists.

Indolence moreover, and luxury, and all undue indulgences, have inevitable tendency to vitiate the best properties of milk. Demonstration of this truth presents itself to the mind of the most heedless observer, in the languid and enervated condition of such infants as are nursed by mothers who possess not fortitude, nor prudence, nor good principles, to enable them to renounce the pleasures of gay society during the time, at least, that nature requires them to discharge the sacred duty of suckling their own offspring. The false refinements of civilization, by removing such persons far from the state natural to mothers, deprive them, to an equal extent, of the power of discharging this important function.

Infants should be put to the breast in four or five hours after their birth:—in the interval, they may get some sweetened water or other very mild thin fluid, for the purpose of removing whatever viscid matter may be adhering to the internal surfaces of the gullet. If twenty-four hours or more shall elapse before the babe is permitted to suck the mother, her breasts become distended with her milk, the act of sucking occasions her acute pain, and the exertions of the infant to imbibe its new beverage often prove the cause of painful chaps in the nipple. Simple as this circumstance of being early sucked, may appear to be, it contributes essentially to making the milk-fever milder, and sometimes altogether prevents its occurrence. Such delay, too, excludes the young one from obtaining the full advantages which nature has bountifully provided for it, in the use of this first milk. Even the parent's own health and the activity of her lactiferous functions depend, in no small measure, on her breasts being excited by an early act of sucking. This has the beneficial effect, also, of conducting not remotely to the milk's increase and the improvement of its quality,—both which indeed, especially its quantity, are generally commensurate with the degree of vitality possessed by its secreting organs:—besides, during the time it remains in the breast, it undergoes an elaboration by which its nutritive virtues are augmented and matured.

Babes, at their birth, do not immediately require nourishment:—the stomach is then filled with a gelatinous formation,—the remains of what had been secreted by that organ, for the new one's sustenance during its foetal growth. Generally, a short time,—three, five, or seven hours, or more,—elapses before it begins manifesting appetite or a desire of sucking; and, in the interval, its bowels and bladder, excited to action by dilatation of the chest in respiration with a concomitant pressure of the midriff on the parts within the belly, sometimes get to be partially relieved. Sweetened wine, manna in solution, syrup of roses, and various other compositions, alike unprofitable or pernicious, are frequently then given to it, with the intention of vigorating the babe, and of hastening its first dejections:—but, they are all altogether useless and unrequired. For the satisfaction of impatient mothers, however, it may receive some sugared tepid water, which will assist in diluting the dark green, ropy matter that still lines the alimentary passages:—but nature, ever wise and provident, has prepared in the maternal breasts a fluid infinitely the best adapted to the execution of this necessary purpose,—and this is the first milk, a fluid at once sweet and agreeable, appetent and remarkably nutritious. Even though a mother do not intend suckling her own child, she should at least never refuse it her first milk, for which there is no equal substitute:—it is the only means of securing, as much as possible, the tender being from gripes and colic pains, by expelling the meconic matter from its bowels more perfectly than any artificial preparation whatever. An infant's stomach is altogether too delicate to bear the wine or purgative drugs wherewith it is too often the custom to torment it, at the very dawn of its new state. Let such, especially a "be-drugged or vinified" babe, be put to suck a nurse whose breasts are replete with old milk, and it will soon be observed to writhe with internal suffering, or to vomit the liquid so foreign to its age and constitution.

(To be continued.)

MODE OF DRESSING A TURTLE.

(From Coleridge's Six Months in the West Indies.)

It is commonly, but I apprehend hastily said, that turtle is eaten in greater perfection in England than in the West Indies. The cookery, I confess, is more studied and elaborate, more science is shown in the anatomy, and superior elegance in the dish-

ing. Besides, it is a greater rarity, and its visits few and far between, leave something of an angelic smack upon the palate of a worthy recipient in England. But setting aside this last advantage, or rather justly esteeming plenty a blessing, a man of unprejudiced appetite will have no difficulty in deciding in favour of the consumption of turtle on the spot of its birth. The nature of this fine animal is not understood by European cooks; they distrust the genuine savour, and all but annihilate it by bilious addiments of their own composition; the punch too, though compleasable *per se*, is drunk so largely as to wash out all remembrance, all rumination on the past, and I have seen some persons so grossly ignorant as to drink once or twice before they have finished their soup. This should not be. A single lime is sufficient; squeeze it and cut it in slices afterwards over the various regions of your plate. The soup should be served up in a capacious tin shell, and should be always well lined inside with a thin crust of pastry; the worst consequence may follow upon the neglect of this last particular, for the liquor becomes lukewarm, tenuous and watery, by immediate contact with ware or metal. In England I have always found a crassitude, a pinguinous gravity in the meat, which makes one repent the having eaten it; it enervates the body with a sort of dry drunkenness.

Atque affligit huma divinæ particulam auræ.

In the West Indies turtle is a generous food certainly, but honest and unsophisticated; it administers in a small space that nourishment which the great exhaustion of the system requires, and there is a freshness and a recency in it, which quickens the palate and invigorates the organs of taste. At a dinner in England, it must be, as they say and do in the city, turtle once and turtle throughout; a man indeed has no appetite for any thing else after so much acid punch and morbid soup as is absorbed there. In the West Indies, turtle is a gentle alarum, as from a silver trumpet blown; it is the propitiation of our manducatory energies, the regretted prophagomenon of Apicius. A glass of Madeira (it should be Sercial, if possible,) is the best thing after this soup; the wine flows in a kindly stream of coalescence with what has been eaten before, and harmonizes with what is to follow; lime punch creates a discountenance, as the lawyers say, and in effect spoils your dinner.

SPORTING OLIO.



(From the Petersburg Intelligencer.)

ANNALS OF THE TURF—No. IV.

Respectfully inscribed to the Amateur, the Sportsman and the Breeder of the Virginia Turf Horse.

Fearnought holds the first claim, prior to the day of Medley, and is therefore entitled to the palm in preference to any stallion that had preceded him in giving the Virginia turf stock a standing equal to that of any running stock in the world. The blood which flowed in the veins of old Fearnought must have been peculiarly rich in those qualities that make up the conformation of the race horse, as not only the whole stock got by Fearnought run well, but also his sons and grandsons were remarkable for generally getting good running stock. There was also strength and stamina universally pervading the Fearnought stock, to which may be added good size, that made them the best distance horses of their day. The fact is, that the Fearnoughts run well all distances, and the old horse stood high-

er than any other horse on the continent for getting racers; and he got more of them than any other—he also was the sire of more fine stallions than any other horse of his day.

Old Fearnought was bred by Mr. Warren, in England, and foaled in the year 1755. He came out of Mr. Warren's fine brood mare "Silvertail," and was got by Regulus, the best son of the Godolphin Arabian. Regulus, when six years old, won eight King's plates. He never was beat, being very superior to any horse of his day.

Silvertail, the dam of Fearnought, was foaled in 1738, and got by Heneage's Whitenose; her dam by Rattle—Darley's Arabian—the old Child mare, got by Sir Thomas Gresley's bay Arabian, out of Mr. Cook's Vixen, who was got by the Helmsley Turk, out of a Royal Barb mare.

Fearnought was imported into this country by Col. John Baylor, who advertised him in the year 1765, as "a bright bay, 15 hands 3 inches high, remarkably strong and active, and full brother to the late Mr. Warren's invincible horse Careless." Old Fearnought died in the fall of 1776, at the age of 21 years.

Among other capital stallions and racers, he got the following, viz:

Nonpareil, out of a Janus mare.

Nimrod, out of a Partner.

America, out of a Jolly Roger.

Regulus, out of the imported mare Jenny Dismal.

Godolphin, full brother to Regulus.

Shakespeare, out of an imported Cub mare.

Gallant, out of a Stately mare.

Shakespeare, out of an imported Shakespeare mare.

Apollo, out of an imported Cullen Arabian mare.

Harris' Eclipse, out of Baylor's imported Shakespeare mare.

Laurel, out of a Fearnought.

Matchless, out of a Sober John.

King Herod, out of an Othello.

Whynot, out of an Othello.

Dandridge's Fearnought, out of ———.

Symmes' Wildair, out of a Jolly Roger, who proved to be the best son of old Fearnought.

Wildair got—

Commutation, out of a Yorick mare.

Highflyer, out of a Yorick mare.

Chanticleer, out of a Pantaloon mare.

Chanticleer, the best son of Wildair, got—

Magog, out of a Wildair.

Prestley, (full sister to Magog,) the dam of

Wilkes' Madison.

Cornelia, the dam of Mr. Randolph's Gracchus.

A FRIEND TO THE VIRGINIA TURF HORSE.

(To be continued.)

Three thousand five hundred guineas (\$16,310.) were refused for Lord Lowther's race-horse Monarch. [English paper.]

DISEASES OF DOGS.

[To the person who should discover a certain remedy for the distemper in dogs—society at large and sportsmen in particular, would be very deeply indebted—to the canine race it is as fatal as ever was the small pox to the human race, when taken in the natural way. We would award high honours and ample rewards to him who should discover in our day, a preventive of the distemper—we would call him a second Jenner, prevention being always better than cure. We heard a gentleman sportsman the other day, going to Annapolis with his gun and two beautiful dogs, remark, that they were two of not more than six survivors, out of litters amounting to 40 in number, all the rest having died with the distemper.—It was his impression that dogs are more apt to die of it than sluts; and that to the progeny of "Old Czar," the distemper had proved far more fatal than to any other fa-

mily of setter dogs he had ever known—this may be so, but the impression may have arisen from a greater number of that family of dogs falling under his observation, in consequence of the great demand for the blood of that extraordinary animal.

From Johnson's shooter's companion, second edition, London 1823, we shall extract all that is said on the diseases of dogs, and we earnestly invite the attention of sportsmen to these extracts, with a view to have the efficacy of their remedies confirmed, or, their inefficacy exposed, according to the experience of those who may possess practical information on the several cases introduced—of all diseases, the distemper is the most dangerous to dogs, and it is in regard to that, that we are especially solicitous of procuring the best information.—We have three most promising young dogs afflicted with this odious disease at this time. ED. AM. FARM.]

THE DISTEMPER.

The distemper generally attacks a dog before he has attained his first year. As a preliminary observation, it may be remarked, that the same membrane which lines the nostrils, extends down the windpipe into the lungs; and the distemper, in the first instance, may be regarded as an inflammation of this membrane; which, if not timely removed extends down to the lungs, where suppuration will soon be produced; when the animal's eye will become dull, accompanied shortly after with a mucous discharge, a cough, and loss of appetite. As the disease advances, it presents various appearances, but is frequently attended with twitchings about the head, while the animal becomes excessively weak about the loins and hinder extremities; indeed he appears completely emaciated and smells intolerably. At length the twitchings assume the appearance of convulsive fits, accompanied with giddiness, which cause the dog to turn round; he has a constant disposition to dung, with obstinate costiveness, or incessant purging.

On the first appearance of the symptoms which I have described, I should recommend the dog to be bled,* and his body opened with a little castor oil; this will sometimes remove the disease altogether, if applied the moment the first symptoms appear. If, however, this treatment should not have the desired effect, and a cough ensues, accompanied with a discharge at the nose, give him from two grains to eight of tartar emetic, (according to the age and size of the dog) every other day. Also a seton or blister on the side will be serviceable, if adopted prior to suppuration of the lungs taking place. When the nervous symptoms ensue, which I have already described, external stimulants (such as sal-ammoniac and oil, equal parts) should be rubbed along the course of the spinal marrow, and tonics given internally, such as bark, &c.

There are few game-keepers, who will not tell you, that they can cure the distemper; and assume an air of mysterious secrecy, if questioned as to the remedy; but they so frequently experience the inefficacy of their own receipt, as to place its infallibility out of the question, and even to induce doubt as to its most remote propriety. Of the various remedies, the following was given with success to a dog, so afflicted as to be scarcely able to stand:

Turbeth's mineral six grains, mixed with sulphur, and divided into three doses, one given every other morning. Let a few days elapse, and repeat the course.

Another:—Calomel, one grain and a half, rhubarb, five grains, given every other day for a week.

Another:—Antimonial powder, sixteen grains, powdered fox-glove, one grain; made into four boluses with conserve of roses, one given at night, and another the next morning for two days.

* The quantity of blood taken to be regulated by the age and size of the dog.

I had no reason to doubt of the eggs of ants receiving a very considerable increase in size; that in elongating, they become transparent, but do not at this time disclose the form of the worm, which is always arched.

To be convinced of the truth of this statement, I viewed these eggs with a microscope; I also measured them, and having separated them from each other, found the longest to be those only, in which the worms were disclosed in my presence. If I removed them from the workers, before they had attained their full length and transparency, they dried up and the worms never quitted them.

Is it, then, to the care which the workers take in passing them across their mouths, that we must attribute the secret of their preservation? Do these eggs require this humidity, or do they absorb a part of it, to furnish nourishment to the little worms they contain? It appears at least highly probable; and the observations of M. Reaumur, give weight to this opinion. I have discovered in his writings, that there are other eggs, which also increase in size,—as those lodged in the galls of different trees, which are occasioned by *Cynips**, or other insects of the same kind.

"It ought not," says this exact and judicious observer, "to be passed by in silence, that the egg which I found in the gall, appeared to be considerably larger than the eggs of the same species, when they proceeded from the body of the fly, or even when they are taken from the body of the impregnated or mother fly, near the time of their being laid. The whole of those I took from the abdomen of the flies I killed, were remarkably small; it therefore appeared certain, that the egg would have increased, and indeed had increased, in the gall."

We are only in the habit of seeing eggs surrounded by a covering incapable of extension; but why is it that those eggs, which nature has enclosed, in a flexible membrane, do not increase? The envelope of the egg may, in this instance, be compared to the membrane which includes the human fetus, and those of quadrupeds.

(To be continued.)

ON MANUFACTURING INDIGO FROM THE INDIGO PLANT.

(From the New York Statesman.)

The consumption of indigo in this country fifteen years ago, was a mere trifle. At this time, owing to the great increase of manufactures, the annual purchase for domestic use cannot be less than from three to five millions of dollars, and it is probable that in ten years the demand will be doubled.

The manufacturing of indigo in the Southern states, to an extent at least equal to supply home consumption, would certainly be an object of great national importance. We have abundance of land calculated for raising the plant, and were our southern planters to turn their attention to the article, they would not so often glut foreign markets with cotton. I know that prime indigo can be made there, having during a period of thirty years bought

* To these insects we are indebted for that valuable article of commerce, the gall-nut. The *Cynips* is furnished with a finely pointed instrument, with which it wounds the leaves and other parts of the tree, for the sake of depositing its eggs. The puncture of the leaves, &c. gives rise to those excrescences termed galls, which not only form the habitation, for a considerable period, of the infant insect, but serve it the whole time of its imprisonment for food. On examining the galls, some will be found to have an opening in them; these are they, from which the fly has escaped: others, that want this aperture, will be found to contain the insect, either in its larva, pupa or imago state; for it appears these several changes, at least with some of the species, take place within the body of the gall.—T.

several small lots, made in South Carolina, and the Mississippi, of excellent quality. It is true the general run of indigo made in the Southern states is of inferior quality; but this deficiency must be attributed to the want of skilful manufacturers; for if one or two lots can be made good, the whole may be, if the conditions necessary to make a perfect article be observed. To obviate this difficulty, I have been endeavouring for two years past to collect information relative to the process of manufacturing indigo after the best and most approved manner. My object has been to collect instructions from practical men who have made the article in other countries; but the intelligence obtained falls far short of my expectation.

The processes of working the wood vat for dyeing blue on woollens, and of manufacturing indigo from the plant, are similar in the most important points, differing mostly in the mode of producing the results. The blue-dyer ferments the indigo till it returns to a green state, collects the green colouring *seculæ* in the pores of the goods dyed, and causes it to oxidize by a rapid alternating exposure to the atmosphere. The maker of indigo ferments the plant till the liquor becomes green, draws it off from the plant, oxidizes the *seculæ* by the agitation, and collects the sediment for the use of the dyer.—The blue dyer, therefore, ought to have a tolerably correct idea of the process of manufacturing indigo, and may be able to throw some light on the subject. On this ground I shall venture to give my opinion on those points in making of indigo which are considered by manufacturers as the most difficult to perform correctly.

There are three points to be attended to in making of indigo, which when observed by a manufacturer, cannot fail of producing a perfect article. These are the time of gathering the plant—the proper degree of fermentation when the plant is in steep, and the supplying the *seculæ*, after the liquor is drawn from the steep, with as much oxygen as is necessary without exceeding the requisite quantum.

I shall proceed to give instructions received from three sources. The first will contain directions from Kirby Dalrymple, Esq. of New London, (Conn.) who was for many years an extensive manufacturer of indigo in the East Indies.

PROCESS.

"Cut the plant when in full flower, after the weather for some days has been dry. Take an iron, brass or copper boiler, fill it within three inches of the top with the plants, press down with stones, and cover the plants with water. The liquor must be heated, not until it boils, but until it begins to blubber, or simmer.—The water by this time will look greenish, then draw it off into a shallow vessel or vat, and beat for one or two hours to incorporate oxygen with it. On taking some of the liquor in a white saucer, little particles will appear in it as big as the head of a pin and smaller; then stop beating, and throw in a little lime water, upon which the indigo will precipitate to the bottom, and the supernatant water will look like brandy. The water has now to be drained off to a level with the top of the sediment, lay the sediment on a cloth to drain, when stiff enough put in moulds to dry."

The above process was sent me by a Mr. Rockwell, of Winchester. With a view of eliciting further information I wrote to Mr. D— requesting more particular instruction, in answer to which I received the following:

"To attempt to define by rules, what is in itself indefinite, would be an endless task, and would only lead to error, and I can assure you, from my own experience, that books and written instructions are always hurtful to a young indigo planter. A few months practice will teach him more than all the books and instructions in the world. The truth is,

the process varies perpetually, even in the same climate, and these endless variations can be met by none but an experienced practitioner. In proof of this I have only to mention that in two of my own factories, within a distance of three miles, on the same day, and the same time of the day, I have known the steepening eight hours longer in one than in the other. I have known a similar difference in one factory on two successive days, without any perceptible change in the climate, or any ostensible cause to account for it. I have observed the same variety in the beating in different factories on the same day, and in the same factory on successive days without any apparent cause. In such cases, experience alone can lead to a successful result, and where this is wanting, there will always be great loss."

This will appear an appalling description to the mere novice in manufacturing indigo, yet there is nothing to alarm any enterprising person, or to prevent his making an attempt, particularly to one who has been accustomed to make any article in which a fermentative process is required, for in every fermentative process there is ever an incertitude in the time of its coming to perfection—the brewer, the distiller, the wood dyer, have all experienced this. Those who follow such pursuits are not alarmed at any irregularity, it is only necessary for them to be able to discriminate between a perfect and imperfect stage of fermentation, so as not to stop it too soon, nor permit it to exceed the requisite degree. Written instructions, therefore, pointing out the colour, smell, and other distinctive indications, assumed by the steepening liquor when the fermentation is complete, cannot fail of being serviceable to the young practitioner. The process of making indigo sent me as that of a Mr. Lediard's, which I shall give in the next essay, enters particularly into all the minutiae of the operations necessary to insure success.

HOPSON.

GRAIN.

Farmers, millers and flour merchants, read the following interesting statement.

The recent measures adopted in England for the admission of foreign grain, (for it is to wheat, rye and barley, that the term corn is applied in England, where they have not what we call corn) are, we observe, exciting attention in the agricultural parts of our country, and are referred to as likely to affect considerably the price of wheat here. It may not perhaps be useless to inquire, how far such a result is likely to occur.—The purport of the two bills before parliament, we believe to be, of the one to admit for consumption all the warehouse corn now in the British ports, and of the other, to import, if and when the ministers shall judge advisable, 4,000,000 bushels from abroad. In proposing the first measure to parliament, Mr. Canning estimated the quantity of corn in bond, at from 2,000,000 to 2,400,000 bushels, equal perhaps to four or five days' consumption for Great Britain.—The additional quantity which ministers may admit, is equal to eight or ten days more.—The United States have never, we believe, exported in any one year, over a million and a half bushels of wheat; though, in the shape of flour, they have exported equal to six millions of bushels. Perhaps the average export from all the ports of the Baltic may be estimated at eight millions of bushels. Supposing then, that it shall be deemed expedient by ministers to admit from abroad 4,000,000 bushels of grain, it appears that much more than that quantity may, taking for our guide the averages of past years, be had either from the Baltic or the United States. As therefore there will be a competition, great profits can scarcely be calculated on. It must then be inquired, what prices may probably be obtained in England, for wheat sent there; and in order to as-

certain this, it is necessary to revert to the statements in parliament, of those who favoured the admission of foreign grain. It was computed by them, that 64s. sterling per quarter, or 8s. sterling per bushel of 60lbs. for wheat, would be a fair remunerating price to the English agriculturist; and with a view to secure this to him, the duty on foreign wheat to be admitted, was graduated at 12s. per quarter, or 1s. 6d. per bushel. On these data a computation may be founded, by which to govern in some degree speculation from this country.—The present price of wheat here is \$1, equal to sterling, 4s. 6d. Add for freight, 1s. 0d. Duty in England, 1s. 6d. Expenses of shipping and commission on selling, 6d

Sterling, 7s. 6d.

But the price to be calculated on in England is only 8s. per bushel; leaving therefore but the chance of 6d. per bushel profit, against the risk of prices that may fall; but which it is the object of every regulation under which the importation is made to prevent from rising. This general result, which is believed to be in the main accurate, is presented in the hope that it may spare some disappointments.

The gain in exchange is not computed—It may be set off against possible contingent expenses, which have not been taken into account.

[Am. D. Adv. July 4, 1826.]

COAL TRADE OF THE LEHIGH.

The following statement exhibits the amount of the weekly shipments of coal from Mauch-Chunk to Philadelphia, during the present season, taken from the books of the Lehigh Coal and Navigation Company:

Week ending	March	9	5 Boats	276 Tons.
Do.	16	10	540	
Do.	23	11	669	
Do.	30	12	693	
Do.	April 6	15	869	
Do.	13	15	887	
Do.	20	21	1191	
Do.	27	18	1072	
Do.	May 4	19	1143	
Do.	11	23	1362	
Do.	18	16	925	

From the foregoing it will be seen that the whole quantity of coal dispatched from Mauch-Chunk to Philadelphia, commencing on the 3d of March last, to the 18th inst. inclusive, is 9627 tons, or 269,566 bushels—being more than double the amount shipped from hence, to the same period of last year.

The business of the company is carried on with increasing energy, and from present appearances it is reasonable to conclude, that one million of bushels will be sent down from Mauch-Chunk this season.

It would be well for our citizens to lay in their coal early, as by so doing they will avoid the confusion and delay which ensues at the commencement of cold weather, when the orders are very numerous. Another inducement is, that coal purchased now, is delivered free of expense for hauling, within the usual bounds.

The demand for Lehigh coal from abroad is very flattering, and heavy shipments are about being made to New York, Boston and other ports.

Weekly statements of the shipments of coal from Mauch-Chunk will be regularly furnished hereafter.

[Dem. Press.]

Nine hhds. of Tobacco arrived here on the 1st, in the tow-boat Dewitt Clinton, from the state of

Ohio, via Lakes, Grand Canal, and last from Albany. It is said to be of the best quality, by good judges. [N. Y. paper, 3d June.]

THE FARMER.

BALTIMORE, FRIDAY, JULY 7, 1826.

DEATH OF MR. JEFFERSON.

The following letter to the Editor conveys the only intelligence yet received, of the death of one of the most illustrious benefactors of his species that ever lived in any age. It will be seen that he lingered until the FOURTH INSTANT—as if Providence had spared him to reach the 50th celebration of that Declaration of American Independence and of free principles, which of itself would suffice to secure immortal renown to its author; and then to expire amidst the grateful benedictions and hosannas of a whole nation. The writer of the letter was a near and much esteemed neighbour and friend of the deceased.

DEAR SKINNER, *Charlottesville, July 4, 1826.*

I give you a mere line, to say that Mr. JEFFERSON expired to-day at 10 minutes before 1 o'clock. It is an event which has been hourly expected for three or four days past.

Your friend, **PETER MINOR.**

§7-A subscriber requests information respecting the effects of plaister of Paris as a manure for red clover or Indian corn. Also, the most approved quantity used to the acre, and the proper time for spreading it.

EXTRACTS TO THE EDITOR—DATED

DEAR SIR, *Bayou Manchac, June 5, 1826.*

"I believe I can with safety say, that the water in the Mississippi river never was so high since Noah's flood as it has been the 1st of this month; but the weather has been generally dry; the season fine for the Mississippi bottom lands, so that our crops of cotton, corn, &c. all look well in this neighbourhood at this time."

DEAR SIR, *Auburn, N. Y. June 29, 1826.*

"We have lately had fine rains in this part of the country, and nature appears to receive and rejoice. Wheat has failed in an unusual degree in many parts of this state. The fly has attacked and destroyed very many fields. Hay will be light—oats, barley and corn will now revive. Wool is a drug; no price can be obtained that will justify its growth. But if you to the south have suffered as much with the drought as we have—wheat must improve in price."

"P. S. Our wheat will not be fit to harvest this three weeks."

TOBACCO.—Inspections in the three State Warehouses during the last week:

No. 1,	213 hhds.
No. 2,	87
No. 3,	130—430.

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Thoughts on Agriculture, by Dr. Johnson—On using Marsh Mud for Manure—Remarks on the construction and management of Cattle Yards—Nantucket Sheep Shearing—Mr. Watson's Sheep Shearing—Treatment of Seed Wheat—On Cabbages, Peas, Asparagus, Fruit, &c.—On the uses, properties, &c. of Milk, continued—Mode of Dressing a Turtle—Annals of the Turf, No. IV.—Diseases of Dogs, on the Distemper—Natural history of the eggs, larvæ, and pupæ of Ants—On manufacturing Indigo, from the Indigo plant—On the Grain market in England—Coal Trade of the Lehigh—Death of Thomas Jefferson—Prospect of Crops.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime, bbl.	7 50	8			
BACON, and Hams, . . lb.	5	9		9	12
BEESE-WAX, Am. yellow	31	33			50
COFFEE, Java,	17	17½		22	25
Havana,	15				20
COTTON, Louisiana, &c.	12	13			
Georgia Upland, . . .	10	11			
COTTON YARN, No. 10, .	30				
An advance of 1 cent					
each number to No. 18.					
CANDLES, Mould, . .	12½	14		16	18
Dipt,	11				14
CHEESE,	10	12		12	16
FEATHERS, Live, . . .	30	31		37	
FISH, Herrings, Sus.	2 37	2 50			
Shad, trimmed, . . .	7 00				
FLAXSEED, Rough, . .	75		87½		
FLOUR, Superfine, city,	4 37	4 50		5 00	
Fine,	4 00	4 50			
Susquehanna, superfi.	4		4 25		
FLAX,	9	11			
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	75		80	
Wheat, Family Flour, .	1 05	1 10			
do. Lawler,	75	85			
do. Red,	91	96			sales
Rye,	75				
Barley,	80				
Clover Seed, Red . .	3 87½	4 25		4 75	
Ruta Baga Seed, . .	1			2 00	
Orchard Grass Seed, .	1 75			2 00	
Mangel Wurtzel Seed, .	1 25			1 50	
Timothy Seed, . . .	2 25			3 00	
Oats,	56				
Beans, White,	1 70			1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country		120	130		
HOPS,	lb.	15		25	
HOGS' LARD,	7		9	12	
LEAD, Pig	6½		8½		
Bar	8			62	
LEATHER, Soal, best, .	22		23		75
MOLASSES, sugar-house	46			62½	
Havana, 1st qual. . .	31		32	37½	
NAILS, 6a20d.	6½			9	
NAVAL STORES, Tar, .	1 37½	1 50			
Pitch,	2				
Turpentine, Soft, . .	1 75				
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter . .	70		75	88	
PORK, Baltimore Mess, .	bbl	11 00	12 00		
do. Prime,	8 00	9 00			
PLASTER, cargo price, .	ton.	4 00			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, . .	5½	7½		8	12
WHISKEY, 1st proof, . .	gal.	28½	30½	38	50
PEACH BRANDY, 4th pr	75	1 00	1 25		
APPLE BRANDY, 1st pr	36			50	
SUGARS, Havana White, .	c. lb.	13	13 50	15	16
do. Brown,	9 00	9 50	10		
Louisiana,	7 50	9 50	10	11	
Loaf,	19	22		20	23
SPICES, Cloves,	70	75		1 00	
Ginger, Ground, . . .	7			12	
Pepper,	16			25	
SALT, St. Ubes,	bush	43		75	
Liverpool ground . .	45			75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	1 15	1 20	2 00		
Lisbon,	1 15	1 20	1 50	1 75	
Claret,	4	8	5 00	9 00	
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bld	lb.	30	35		unwashed
do. crossed,	20	22			but free of
Common, Country, . .	15	20			tags.
Skinnors' or Pulled, .	20	25			

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AGRICULTURE.

THOUGHTS ON AGRICULTURE.

By Dr. JOHNSON.

(From the Visiter, 1756.)

At my last visit, I took the liberty of mentioning a subject, which, I think, is not considered with attention proportionate to its importance. Nothing can more fully prove the ingratitude of mankind, a crime often charged upon them, and often denied, than the little regard which the disposers of honorary rewards have paid to *agriculture*; which is treated as a subject so remote from common life, by all those who do not immediately hold the plough, or give fodder to the ox, that I think there is room to question whether a great part of mankind has yet been informed that life is sustained by the fruits of the earth. I was once indeed provoked to ask a lady of great eminence for genius, *whether she knew of what bread is made?*

I have already observed, how differently *agriculture* was considered by the heroes and wise men of the *Roman* commonwealth, and shall now only add, that even after the emperors had made great alterations in the system of life, and taught men to portion out their esteem to other qualities than usefulness, *agriculture* still maintained its reputation, and was taught by the polite and elegant *Cæsar* among the other arts.

The usefulness of *agriculture* I have already shewn; I shall now, therefore, prove its necessity: and having before declared, that it produces the chief riches of a nation, I shall proceed to shew, that it gives its only riches, the only riches which we can call our own, and of which we need not fear either deprivation or diminution.

Of nations, as of individuals, the first blessing is independence. Neither the man nor the people can be happy to whom any human power can deny the necessities or conveniences of life. There is no way of living without the need of foreign assistance, but by the product of our own land, improved by our own labour. Every other source of plenty is perishable or casual.

Trade and manufactures must be confessed often to enrich countries; and we ourselves are indebted to them for those ships by which we now command the sea, from the equator to the poles, and for those sums with which we have shewn ourselves able to arm the nations of the North in defence of regions in the Western hemisphere. But trade and manufactures, however profitable, must yield to the cultivation of lands in usefulness and dignity.

Commerce, however we may please ourselves with the contrary opinion, is one of the daughters of Fortune, inconstant and deceitful as her mother; she chuses her residence where she is least expected, and shifts her abode when her continuance is in appearance most firmly settled. Who can read of the present distresses of the *Genoese*, whose only choice now remaining, from what monarch they shall solicit protection? Who can see the *Hanseatic* towns in ruins where perhaps the inhabitants do not always equal the number of houses; but he will say to himself, these are the cities whose trade enabled them once to give laws to the world, to whose merchants princes sent their jewels in pawn, from whose treasuries armies were paid, and navies supplied!—and who then forbear to consider trade as a weak and certain basis of power, and wish to his country greatness more solid, and felicity more durable?

It is apparent, the very trading nation flourishes, while it can be said to flourish, by the courtesy of others. We cannot compel any people to buy from us, or to sell to us. A thousand accidents may prejudice them in favour of our rivals; the workmen of another nation may labour for less price, or some

accidental improvement, or natural advantage may procure a just preference to their commodities; as experience has shewn, that there is no work of the hands, which, at different times, is not best performed in different places.

Traffick, even while it continues in a state of prosperity, must owe its success to *agriculture*; the materials of manufactures are the produce of the earth. The wool which we weave into cloth, the wood which is formed into cabinets, the metals which are forged into weapons, are supplied by nature with the help of art. Manufactures, indeed, and profitable manufactures, are sometimes raised from imported materials, but then we are subjected a second time to the caprice of our neighbours. The natives of *Lombardy* might easily resolve to retain their silk at home, and employ workmen of their own to weave it. And this will certainly be done when they grow wise and industrious, when they have sagacity to discern their interest, and vigour to pursue it.

Mines are generally considered as the great sources of wealth, and superficial observers have thought the possession of great quantities of precious metals the first national happiness. But *Europe* has long seen, with wonder and contempt, the poverty of Spain, who thought herself exempted from the labour of tilling the ground, by the conquest of *Peru*, with its veins of silver. Time, however, has taught even this obstinate and haughty nation, that without *agriculture*, they may indeed be the transmitters of money, but can never be the possessors. They may dig it out of the earth, but must immediately send it away to purchase cloth or bread, and it must at last remain with some people wise enough to sell much, and to buy little; to live upon their own lands, without a wish for those things which nature has denied them.

Mines are themselves of no use, without some kind of agriculture. We have, in our own country, inexhaustible stores of iron, which lie useless in the ore for want of wood. It was never the design of Providence to feed man without his own concurrence; we have from nature only what we cannot provide for ourselves; she gives us wild fruits, which art must meliorate, and drossy metals, which labour must refine.

Particular metals are valuable, because they are scarce; and they are scarce, because the mines that yield them are emptied in time. But the surface of the earth is more liberal than its caverns. The field which this autumn is laid naked by the sickle, will be covered, in the succeeding summer, by a new harvest; the grass, which the cattle are devouring, shoots up again when they have passed over it. *Agriculture*, therefore, and *agriculture* alone, can support us without the help of others, in certain plenty, and genuine dignity.

Whatever we buy from without, the sellers may refuse; whatever we sell, manufactured by art, the purchasers may reject; but, while our ground is covered with corn and cattle, we can want nothing; and if imagination should grow sick of native plenty, and call for delicacies or embellishments from other countries, there is nothing which corn and cattle will not purchase.

Our country is, perhaps, beyond all others, productive of things necessary to life. The pine apple thrives better between the tropicks, and better furs are found in the northern regions. But let us not envy these unnecessary privileges. Mankind cannot subsist upon the indulgencies of nature, but must be supported by her more common gifts. They must feed upon bread and be clothed with wool; and the nation that can furnish these universal commodities, may have her ships welcomed at a thousand ports, or sit at home and receive the tribute of foreign countries, enjoy their arts or treasure up their gold.

It is well known to those who have examined the

state of other countries, that the vineyards of *France* are more than an equivalent to the mines of *America*; and that one great use of Indian gold, and Peruvian silver, is to procure the wines of *Champagne* and *Burgundy*. The advantage is, indeed, always rising on the side of *France*, who will certainly have wines, when Spain, by a thousand accidental causes, may want silver. But surely the vallies of *England* have more certain stores of wealth. Wines are chosen by caprice; the products of *France* have not always been equally esteemed; but there never was any age or people that reckoned bread among superfluities, when once it was known. The price of wheat and barley suffers not any variation, but what is caused by the uncertainty of seasons.

I am far from intending to persuade my countrymen to quit all other employments for that of manuring the ground. I mean only to prove, that we have, at home, all that we can want, and that therefore we need feel no great anxiety about the schemes of other nations for improving their arts, or extending their traffick. But there is no necessity to infer, that we should cease from commerce, before the revolution of things shall transfer it to some other regions! Such vicissitudes the world has often seen; and therefore such we have reason to expect. We hear many clamours of declining trade, which are not, in my opinion, always true; and many imputations of that decline to governors and ministers, which may be sometimes just, and sometimes calumnious. But it is foolish to imagine, that any care or policy can keep commerce at a stand, which almost every nation has enjoyed and lost, and which we must expect to lose as we have long enjoyed it.

There is some danger lest our neglect of *agriculture* should hasten its departure. Our industry has for many ages been employed in destroying the woods which our ancestors have planted. It is well known that commerce is carried on by ships, and that ships are built out of trees; and, therefore, when I travel over naked plains, to which tradition has preserved the name of forests, or see hills arising on either hand, barren and useless, I cannot forbear to wonder, how that commerce, of which we promise ourselves the perpetuity, shall be continued by our descendants; nor can restrain a sigh, when I think on the time, a time at no great distance, when our neighbours may deprive us of our naval influence, by refusing us their timber.

By *agriculture* only can commerce be perpetuated; and by *agriculture* alone, can we live in plenty without intercourse with other nations. This, therefore, is the great art, which every government ought to protect, every proprietor of lands to practise, and every inquirer into nature to improve.

JUMPING PLOUGH.

Washington, Mississippi, May 6, 1826.

Sir,
In pursuance of a resolution of the Board of Directors of the Adams Athenæum, I have the honour to enclose to you, an Address delivered before said institution, the 27th ult., together with the annexed drawing of the "Jumping Plough," by Col. B. L. C. Wailes; which you are requested to publish in the "American Farmer."

Very respectfully, your most obed't serv't,
JAMES SMITH, Corres. Sec'y.
To the Editor of the Am. Farmer, }
Baltimore.

Adams Athenæum—27th April, 1826.

MR. PRESIDENT,

Having recently examined an agricultural implement, not generally known, and but recently introduced into our state; one, in my opinion, of great utility;—I have thought that a description of it would not prove uninteresting. I refer to the Jump-

ing Plough, as it is termed. It is simple in its construction, being merely a shovel plough of large size preceded by a strong coulter, somewhat of a sabre form, affixed to the beam in an inverted position, or inclining backwards and touching, nearly, the point of the shovel, and penetrating the ground rather less than an inch below it. The annexed sketch exhibits the relative proportions of its different parts, the principal of which are as follow:

Length of the beam four feet; helve of the shovel two feet three inches; from the bottom of the beam to the top of the shovel, nine inches; shovel fifteen inches long, twelve inches wide; handles four feet; coulter twenty-three inches; rod eighteen inches in length. This plough is designed for breaking up and cultivating newly cleared land, and is admirably calculated for this purpose. The position of the coulter and its consequent motion through the ground, enables it readily to sever all smaller obstructions to its progress, whilst those of a firm and unyielding character raise it until the impediment is surmounted, when it plunges again into the ground

and pursues its course, throwing the earth on both sides and leaving a deeper and wider track than the bar-share plough.

With two horses this plough will break up thoroughly, and with ease, the almost impervious mat of cane roots with which most new ground in the western section of this state abounds; much more so than two yoke of oxen and a bar-share plough.

It is particularly serviceable in planting the first crop in cane land, and cotton sown, in a single trench made by it, raked in and cultivated with the hoe, will produce almost as abundantly as by any other process of cultivation.

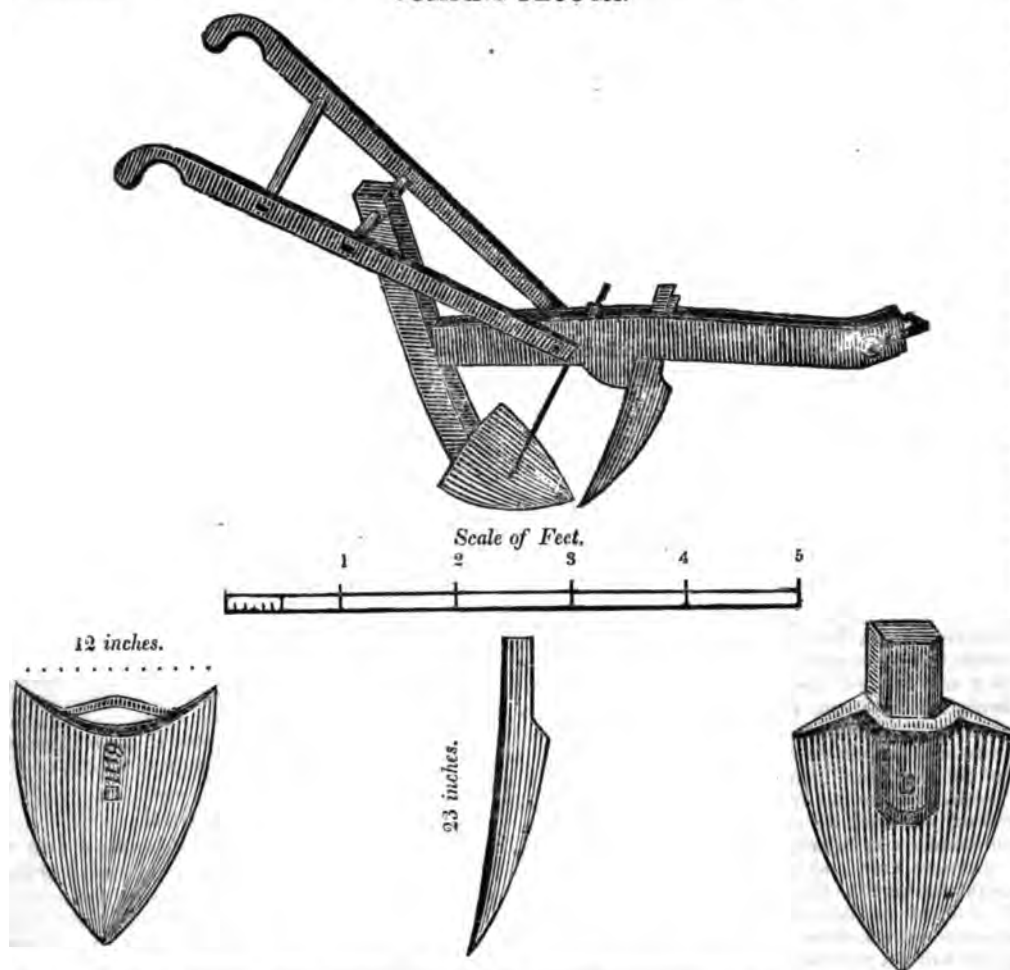
By whom it was first introduced into the state, whether it be a late invention, and whether it is in use in other states, I have not been able to learn. I am rather inclined to believe that we are entitled to the credit of the invention.

It cannot fail to recommend itself to general use, in new land, wherever known.

B. L. C. WAILES.

Adams county, Mississippi.

JUMPING PLOUGH.



RARE RIPE WHEAT.

MR. SKINNER,

Talbot county, July 6, 1826.

You may recollect, that a few years past, I wrote to you to ask the favour, that you would make an inquiry among your numerous correspondents, for some of the "Early, or Rare ripe Wheat," as it is called; and notwithstanding your kind exertions you were unable to procure it, or to learn whether it was still cultivated.

I grew that wheat twenty-two years ago, and for three or four years immediately preceding. The unfortunate wet season just before and during har-

vest in 1804, affected this wheat particularly, because it ripened earlier than the other kinds, and was, on that account, more exposed at a critical period to the destructive influence of the wet. All wheat was excessively injured that year by wet, but the early wheat, from the cause I have mentioned, most of all. This wheat was then universally condemned, and has never been cultivated in Maryland, as far as I can learn, since, until within the last three years. Upon reflection I was persuaded that this sudden rejection of that wheat was injudicious and unreasonable.

The ruinous destruction of the wheat crop by the

Hessian fly, has produced the necessity for a most active inquiry and exertion to elude its ravages, and my petition to you to endeavour to procure the early wheat, was founded upon a conviction, derived from a knowledge of the character of that wheat, that it would probably be most exempt from the effects of the Hessian fly. In this county we seed with perfect security against the effects of the Hessian fly in autumn, by commencing after the first week in October—but we are altogether dependent upon the course of the weather in the spring, as to the degree of injury we sustain. A cold, moist, and what is called a latter spring, affects the progress of wheat less than that of any other plant, and in such a season it gets such a growth and such strength before the fly makes its appearance (as it requires much warmer weather to bring it forth,) that it resists its ravages in a great degree, where there has been proper attention to manuring and cultivation. A very forward, warm and genial spring is almost uniformly destructive to the wheat crop, because it brings the fly into existence and action much earlier, and causes its depredations to be commenced upon the wheat plant in that stage when it is younger, smaller, and weaker, and of course less capable to resist or to bear them.

Generally speaking, the first effect produced by the fly in the spring, is visible from about the 20th of April to the 1st of May, according to the season; and that injury is continued for two or three weeks, when the insect arrives at that stage when its destructive influence ceases to be felt, and the wheat plant has from that time until about the 25th of June (the ordinary period of wheat harvest with us,) to recruit and to mature.

Upon these facts I reasoned in relation to the early wheat. This wheat bears late seeding as well or better than any other sort of wheat, and is least of all subject to rust or scab; few instances, if any, are known, when it ever suffered from rust. It can be used, therefore, with a certainty of avoiding the autumn fly: it is always forwarder than any other sort of wheat in the spring by at least ten days or a fortnight, and becomes jointed by the time the Hessian fly first makes its appearance. In that state the young fly can make but little impression on it; it is too far advanced to suffer from its depredations.

Two years ago, I fortunately procured five bushels of this early wheat from a kind friend who had obtained it the year before from the state of Delaware. My friend's wheat was seeded in a piece of good land, and I had an opportunity of seeing it frequently from the time it was seeded (early in October,) until harvest, and I carefully marked its progress. The Hessian fly did not affect it at all. On the 1st day of May it was strongly jointed and produced a beautiful crop. The effects of the fly in all other wheat were very visible and much felt. I seeded my wheat the following autumn about the 3d of November, the last of my crop; the ground wet and heavy and in a bad state. The wheat came up badly, as might have been expected; looked ill during winter, and grew off in spring puny and not much to my satisfaction. The attack of the fly was rather early and severe last spring, and I thought if it could injure the early wheat, it had the best possible chance to destroy mine, which was unusually weak and unpromising. Whilst other wheat suffered, the early wheat regularly progressed, unaffected to all appearance, and truly too, by the fly, and made as good a crop, considering the unfavourable circumstances under which it was seeded and its bad aspect during the winter, as could have been expected. I reaped more than twelve bushels to the acre. The seasonable month of May of last year aided this well as the fly affected wheat.

Like all the other wheat, the early wheat was much injured by the weevil fly the stack, and as I

desired to keep it pure, it was kept in stack to the last; that I might the better clean up and keep it separate from all other kinds. Being longest in stack it was most affected, for I did not get it out until the first of September. I ought to state too that this early wheat was nearly a fortnight sooner in stack than any other wheat. That it was not injured by the storm of the 4th of June last year, I count nothing on, as the occurrence of the storm and the period it came, were accidental things. All the other wheats happened to be in blossom at the time of that storm and suffered; the early wheat had passed through that stage and fortunately escaped. The grain was fine and heavy.

I seeded this wheat again last autumn, from the 1st to the 20th October; but owing to the weevil fly it came up badly. The failure this season in the wheat crop from defective seed last autumn is very general. Being absent from home during the winter, I did not see this crop on the ground from the 24th of December until the 10th of March following, when, although not very fine, it was greatly superior to my expectations from it, when I recollected the appearance it presented when I left home in December previous. Up to the first of May this year, (1826,) the spring season was favourable for wheat of all kinds; but the drought then commencing, the destruction of the fly has been great. My early wheat was uninjured by fly this season; other wheat near to it, and seeded after it, was a good deal injured; other wheat again, seeded at the same time, in a different field, was much destroyed. I commenced harvesting this wheat this year on the 9th of June, and secured a good crop from the ground before the general harvest and the wet weather came on.

From my former knowledge of this wheat, and from the experience of the two past years, I am persuaded it is the wheat that will not only most frequently escape the effects of the Hessian fly, but that it will hardly ever be injured by it.

It has been thought that this wheat will not yield well, because the head is short; yet it ought to be remembered, that no wheat head is so well filled generally, and we seldom find any wheat that averages better to the acre or to the stack. When the old white wheat succeeds, or the blue straw, I believe no wheat yields so abundantly; but the early wheat never fails to give you good grain, from its early maturity. It depends, of course, like other wheat, for its product, on the quality of the land and the season. But I believe it will average more pounds of grain in any given number of years, upon the same land, than any other wheat that we know of. It is thought, too, by some, that this wheat is a tender species. Of this I have no evidence, but the opinion of those who assert it, some of whom are entitled to much consideration from their intelligence and experience. I am satisfied that since our late improvements in agriculture, by manuring, and draining, and better cultivation, our country is better adapted to this wheat now than before; and I am further satisfied, that upon all dry wheat lands, (as all wheat lands ought to be,) whether stiff or light, it will be found the most productive wheat generally, as long as the Hessian fly remains with us. As Maryland must be a grain country, I have stated these facts, and thrown out these suggestions, to induce others to make fair experiments on this wheat, in order that all may receive the benefit, if my opinions should be proved to be correct.

AGRICULTOR.

DROUGHT AND FRESHET IN VIRGINIA.

J. S. SKINNER, Esq. Albemarle, Va., July 1, 1826.

Dear Sir,—You no doubt will have heard, before this reaches you, of the late disaster which has happened to a great portion of the farmers and planters of Virginia. After having experienced one of

the greatest droughts ever known so early in the season, which curtailed our crops of small grain, clover, meadows, and indeed every thing else—we have been visited by one of the greatest and most destructive freshets ever known in this part of the country. The rain which caused it fell on Sunday night, the 25th of June. The losses sustained in various ways are incalculable. The greater part of the wheat and other small grain on all the low grounds of the rivers and creeks, has been swept off—the tobacco also carried away or buried up—the corn broken down and ruined; fences swept off, mill dams broken—and many mills and saw mills entirely carried off, and the lands much washed in the cultivated fields. The loss of crops on James' river, from Lynchburg to Richmond, will be immense. I consider my loss in tobacco and grain not less than \$1000, besides the loss of soil. The wide extent of this calamity must be seriously felt for some time in Virginia. I have not yet seen any of the Richmond papers since the freshet, but anticipate gloomy accounts. But these are occurrences to which we must submit with resignation and fortitude; double our diligence, and hope for better times. Wishing you health and prosperity, I remain,

Your obed't serv't,

WM. WOODS.

PLANTING TUBE—INQUIRY.

Sir,

Cincinnati, Ohio, June 27, 1826.

In your last number (13, vol. 8,) Mr. James Williams speaks of, and partly describes, a *planting tube*, admirably adapted for saving the back. Will he please to inform us farther of what material this tube is made? Of tin or wood? If the latter, of what kind, and must we not go to the turner's lathe for it? I wish to get one, although I know a sly old neighbour who will say, when he sees it, that "lazy folks always take the most pains." As the culture of silk appears to be agitated, I can send you, if you request it, any quantity of eggs for gratuitous distribution.

Yours, &c.

TELLUS.

LADIES' DEPARTMENT.

NUTRITION—FOOD.

(Continued from p. 124.)

With the force of all these observations, it is intended to impress strongly on the minds of parents, the importance of the following practical conclusions: that, the maternal milk is the natural food of infants; that mothers, except for the most urgent reasons, ought never to renounce the delightful duty of suckling their own offspring; that the first milk constitutes the best nourishment and the best medicine for a new born child; that next to the mother's in suitableness for the object, is the milk of a healthy nurse whose own child's birth was, as nearly as possible, coeval with that of her nursling;—that after these, stands what is furnished by the cow or other animal in whom it retains properties approaching to that of human milk:—and that, as milk is favourable to the perfect development of the teeth and bones, and indeed of the whole animal economy, it ought to enter, in proportions appropriately varied, into the diets of all infants, children, and growing persons.

Preparatively to putting her young one to suck for the first time,—which may be in three or four hours after its birth,—the mother should have her breasts carefully fomented,—primarily with tepid water and soap of the blandest kind,—and then with a lotion composed of milk and water in equal proportions, slightly sweetened, and warmer by a few degrees than the temperature of her own person. Such means, notwithstanding their simplicity, con-

tribute much to accelerate the secretion of milk, make its progress less distressing; and, by removing the bitter exudation naturally deposited on the nipple, facilitate the suckling's first exertions at obtaining the vital fluid destined for the nourishment of its helpless days. While this is being done, she should retain a lying posture in the bed, and be exposed to the least possible annoyance, or fatigue, or danger of cold. Without changing her attitude, the babe may now be admitted to her breast, and will, in general, begin attempting to suck. If, however, it be listless and reject the nipple,* it ought to be withdrawn, so as to not disquiet or exhaust the parent with its refusals or unavailing efforts:—but, in a short time, a new trial of its inclinations may be made. When mothers cannot give the breast, except in a sitting posture, they should be raised with the gentlest caution, have themselves comfortably supported with pillows, and secured by proper coverings from sustaining injury by the influences of external air.

Infants, at the beginning, are able to obtain but little milk:—this little however, is of the highest use for promoting objects in them, which have already been explained. In each successive endeavour, from its exciting the nerves and vessels of the breast, the supply becomes more copious, and they imbibe it in greater abundance and with the greatest ease:—in the end, it constitutes a most delicious fare on which they feast with advantage and delight.

Notwithstanding its being the natural and positive duty of all mothers, under ordinary circumstances, to suckle their infants, yet such reasons may exist or be induced, with regard to some individuals, as shall render their engaging in the discharge of this duty either impracticable or improper. Such mothers, however desirous, cannot therefore undertake the charge of suckling, who have the organization of their breasts naturally imperfect, or injured by the effects of accident or disease;—because, both these states give rise,—to defect in the milk's quantity or quality, sometimes to its total absence,—to undue contraction of the mammary vessels, with consequent difficulty to the child, of sucking them,—or, to faulty relaxation, inducing both a want of power in them to retain the secreted milk, and a constant involuntary extillation of it from the nipples. Others, after having attempted it, will require to discontinue nursing when they find it proving injurious to their own health, by occasioning pains in the back, loins, and chest,—cough, panting, and uneasy breathing,—head-ache, failing of the sight, with inflammatory and other affections of the eyes;—insuperable watchfulness during the night,—and loss of appetite, thirst, slowness of the bowels or their excessive freedom, and similar symptoms of impaired digestion.

Very few females have constitutions naturally so weak and feeble as to incapacitate them for enjoying the delights of suckling their babes. Has not such a mother already been able, without injury to her health, to furnish from her own system the incessant supplies required for the nourishment and growth of the new one throughout all its foetal age? Many, the most delicate and despondent, are daily seen to remain quite vigorous and happy so long as they continue employed in the performance of this

* Defect in the size of the formation of the nipple, is described as having sometimes been observed; and various mechanical contrivances, or its being sucked by an adult or an older infant or even by a lamb, have been recommended as appropriate remedies:—but, this is a defect which must be regarded as being almost universally rather imaginary than real; and, when unnecessary attempts at supplying it are instituted, they are calculated to injure the delicate organ on which such practices may be employed, as well as to defraud the babe of a precious boon which the proudest ingenuity of science is unable to replace.

interesting office. Observation of such a fact, then, would suggest the propriety of every one engaging, at least, in a trial of her powers:—but, this may be discontinued so soon as she finds herself unequal to the task of furnishing enough of healthy milk, or of undergoing the cares and fatigue inseparable from her charge.

Mothers who resolve on rearing their progeny with the maternal milk, ought to form an unyielding resolution of denying themselves the enjoyment,—if there be such a thing in nature,—of every pleasure and amusement which may lead to personal or mental exhaustion. Irregularity of all kinds,—excessive indulgencies, by whatever name they may be called,—intemperance under every shape and in every degree,—all indeed, in social or domestic life, that conduces whether immediately or remotely to depress the mind or exalt the passions, is absolutely incompatible with the tranquility of that equal and sedentary life which the duty of suckling infants demands. If there be such mothers, then, who are unable to seclude themselves from such engagements or resist the incentives to such practices, it is in all respects proper that the pious labours, for which they thus ungenerously disqualify themselves, should be transferred to the management of a faithful nurse.

Various and discordant sentiments have been entertained on the question,—whether females having the consumptive taint ought to become nurses. How, it has been asked, can an infant possibly sustain injury from sucking milk secreted from the blood of a being, by whose blood alone and without the intervention of other agency, the elements of its foetal existence was furnished, and, in the end, favourably perfected? Experience, however, resolves the difficulty by presenting instructive facts to the consideration of mankind. It is well-known that, though many of the worst symptoms in a phthisical woman do subside during her pregnancy, they all re-appear, and often in an aggravated form, immediately after that condition has terminated. Her lungs fast decay, her strength sinks, her person becomes emaciated, she gradually ceases to desire or properly digest food, and her infant, however healthy in appearance, forthwith begins to exhibit signs of suffering from griping pains, or from accessions of nervous agitation, which have been known to become permanent. For the purpose of preventing the affections so often consecutive to childbirth, such mothers may lose their milk for one fortnight or a month,—and, it has been advised 'that a young one of the sheep or dog should be employed in this office:—but, for her infant's sake as well as her own, no woman having a decided tendency to consumption ought to undertake the charge of suckling a child. The vitality of blood is matured in the lungs, and the milk's perfection depends much on the purity of the blood; consequently, the milk of a consumptive nurse cannot be nutritious,—because her blood is insalutary in proportion as the organization of her lungs has suffered from the depredations of disease.

(to be continued.)

WASHING SALADS.

In the first number of the "Gardener's Magazine," conducted by Mr. Loudon, and just published, is a paper on the best modes of washing water cresses and other salads, so as to free them from the larvæ of insects and worms. The method is very simple, and consists in merely placing the salad in salt water or sea water, for three or four minutes, which is sufficient to kill and bring out the worms, after which the vegetables are washed in fresh water in the usual way. The information is brought out in the proper time, just after the salad season commences; and as all salads are subject to insects, and many of them inconceivably small, the hint, as a matter of cleanliness, is worthy of attention.

SPORTING OLIO.



(From the Petersburg Intelligencer.)

ANNALS OF THE TURF—No. V.

Respectfully inscribed to the Amateur, the Sportsman and the Breeder of the Virginia Turf Horse.

The stock of old Medley may justly be ranked as among the most remarkable and valuable that have ever signalized themselves on a Virginia race course. This stock of horses lacked nothing but size to have made the best racers in the world; and yet their want of size was not manifested on the turf, as their ability to carry weight exceeded that of any other stock; they were also more remarkable for good wind or bottom, for fine limbs and good eyes than other races of horses which have been bred in Virginia. These qualities resulted in this stock (and were more peculiar to them than to any other,) from the close proximity of the points of the hips to the shoulder, from the uncommon solidity of their bones, the close texture of their sinews, and the bulk and substance of their tendons, which always enabled them to carry the highest weights and to endure the greatest stress on their bodily powers. To these qualities may be added their uncommon purity of blood, derived from their sire old Medley, who was one of the purest blooded horses ever bred in England.

Gimcrack, the sire of Medley, was one of the most remarkable horses of his day in England. He was a grey, and called the "little grey horse Gimcrack," foaled in 1760, got by Cripple, a son of the Godolphin Arabian. Gimcrack was one of the severest running and hardest bottomed horses that ever ran in England; although small, yet his ability to carry weight was very great, for he frequently gave the odds as high as 28 pounds, and he continued on the turf until 11 years of age, thereby shewing his uncommon hardness of constitution and firmness of limbs—qualities which he richly transmitted into the veins of Medley. Gimcrack at 4 years old won seven 50l. plates, 4 miles; also in 1765, at 4 miles, 50l.; also 1000 guineas, 250 guineas forfeit. He beat the Duke of Cumberland's Drone, 4 miles, for 500 guineas, giving him 21 lbs. In 1766 he was sent to France, and 1767 returned to England, and won in that year four 50l. plates, 4 miles. In 1768, two 50l. plates and the silver bowl. He beat Mr. Vernon's Barber for 300 guineas, giving him 28 lbs. in 1770. He beat Lord Rockingham's Jacko for 3000 guineas, giving him 28 lbs.; also Lord Rockingham's Pilgrim for the whip and 200 guineas, the whip equal to the guineas. Gimcrack was then ten years of age. Earl Grosvenor had two portraits taken of Gimcrack: that of Gimcrack preparing to start is reckoned excellent of its kind. The two portraits, it is said, represent this horse in different shades of grey; the iron grey of his youth, and the hoary white of his old age. Gimcrack had acquired such fame and celebrity, that his last proprietor left him a length of time at Tattersal's for the inspection of the public.

The dam of Medley was Arminda, by Snap, (full sister to Papillon, the dam of Sir Peter Teazle, the best in England.) Medley acquired his beautiful symmetry and proportions from Snap, who was a horse of "great beauty and justness of proportion, strong, vigorous and muscular, and was upon an equality as a racer, if not superior to any horse of his time." Medley was imported to this country by Malcomb Hart, in the year 1785. Among many

other distinguished racers and stallions, Medley got the following, viz:

Boxer, out of a Fearnought mare.
Opennico, out of a Lindsey Arabian mare.
Quicksilver, out of a Wildair.
Young Medley, out of a Blue and all Black.
Melzar, out of a Wildair.
Lamplighter, out of a Longsdale.
Fitz-Medley, out of a Dandridge Fearnought mare.
Gimcrack, out of an Ariel.
Bellair, out of a Yorick.

Bellair may justly be distinguished as the best son of old Medley, not only as being upon an equality as a racer, but as having got more fine stallions, racers and brood mares, and as being decidedly the best bred son of his distinguished sire. Bellair partook of the best blood that has been highly valued in Virginia, viz: of Morton's Traveller through Yorick, Fearnought, Partner, Mark Anthony, &c. Col. Tasker's famous running mare Selima, that was the dam of Partner, was the great grandam of Bellair; and I will here take occasion to correct an error in the pedigree of this celebrated mare, as it has prevailed for more than thirty years in all the published pedigrees which I have seen of Bellair. Col. Tasker's Selima is represented to have come out of a mare called Snap-Dragon, by Snap; this is a manifest error: the Godolphin Arabian, who sired Selima, died in 1753; Snap was foaled in 1750 and did not commence covering until six years old; hence the first Snap mares were not foaled till 1757, four years after the Godolphin was dead. Colonel Tasker's Selima was bred by Lord Godolphin, and came out of a mare by old Fox, that was the dam of Daphne, (full sister to Selima, see Stud Book,) and also of the celebrated running horse Weasel, that was the property of Lord Rockingham—the grandam of Selima by Flying Childers—Makeless—Taffolet Barb—Natural Barb mare.

I would urge upon the breeders of the Virginia turf horse to take in, in their different crosses, as much of the blood of old Medley and Bellair as possible, to give their stock firm limbs, very much needed at this time, as the Virginia race horses of the present day train off the turf too early.

The following letter, appropriate to the present subject, from that eminent breeder and sportsman, Col. John Tayloe, formerly of Mount Airy, Virginia, now of Washington city, will conclude the present number:

"In reply to your favour, I shall be happy if any information I am able to give you, in regard to old Medley and such of his stock as I have owned, can be of service to you. Old Medley was imported into this country about the year 1785; was owned by Mr. Malcomb Hart, and stood at Hanover Court-house. He was one of the most beautiful horses I ever saw; I cannot at this remote period pretend to describe him, further than he was a grey horse of the finest proportions and not more than 14½ to 15 hands high. I have always esteemed him one of the best horses ever imported into the United States, and concur with you in opinion that his stock is decidedly the best we have had. His colts were the best racers of their day, although they were generally small; but their limbs were remarkably fine, and they were distinguished for their ability to carry weight. I owned some of the best of his colts. Bellair and Calypso I bred; Grey Diomed and Quicksilver I purchased from the profits which I realized from their successful performances on the turf. I have reason to hold Medley in grateful remembrance.

"As respects Bellair, he was strong built and rather stout, good eyes and remarkably fine bony legs, rather above 15 hands. I do not think his bottom was surpassed by any horse on record; if ever he locked his antagonist, I felt confident of success. When he ran with Mr. Randolph's Gim-

crack, he was in excessive bad order, after a long journey in bad weather from Maryland. They ran three 4 mile heats, in each of which Bellair mended, and was not beat far. I refused 500 guineas for him immediately after the race.

"I concur with you respecting the old Virginia stock, which should not be lost."

A FRIEND TO THE VIRGINIA TURF HORSE.

N. B. Having given an account of Col. Tasker's imported mare Selima, it may not here be improper to add that of Carter Braxton's imported mare Kitty Fisher; as those two mares bred more fine stock in Virginia than any other imported mares brought to this country; it being well known to the sportsmen and breeders for the turf, that some of the highest formed racers and stallions bred in that state were descended from those two mares.

Kitty Fisher was a grey mare, foaled in 1755, and imported by Carter Braxton in the fall of 1759. She was bought by Mr. Braxton, at New Market, England, in the spring of 1759, being then the property of the Marquis of Granby, and stood at the time engaged in a sweepstake for 3600*l.* for 3 years old fillies; but the Marquis being abroad with the British armies, he was allowed to withdraw himself from his racing engagements, and directed all his running stock to be sold. At the sale she was purchased as above, and sent over to this country. She was got by Cade, (one of the finest sons of the Godolphin Arabian,) her dam by the Cullen Arabian, out of the famous mare Bald Charlotte. (Bald Charlotte was a high bred mare, of the finest form, and winner of King's plates.)

Kitty Fisher was trained in this country and run, and won easily, several matches.

(To be continued.)

DISEASES OF DOGS.

Worms.

Dogs, like human beings, are subject to worm diseases of various kinds. A disorder, generally distinguished by the appellation of *lank madness* is produced by short thick worms, which occasionally breed in prodigious quantities in the animals stomach and intestines. This, and what is denominated *sleeping madness*, appear to be merely two names for the same disease. When a dog is thus afflicted he will become lean, though he will feed voraciously; as the disorder increases, his appetite in a great degree forsakes him; his eyes appear dull and drowsy, and he will manifest an almost continual inclination for slumber, without being able, however, to sleep soundly:—

Take of calomel, six grains;
Common soap, two scruples;

made into two bolusses, one of which to be given at night, and the two other the following morning; after two days, the same to be repeated, and in four days more, give the following:—

Extract of colocintida, two scruples;

made into three bolusses and one given every morning: on the fourth morning, give the animal a table spoonful of syrup of buckthorn. If the worms should not be entirely destroyed in a little time, repeat the course.

Dogs are often troubled with large worms, which, without medicine, are occasionally voided singly or in clusters. Their existence may be known by the dog's voracity and leanness. The best remedy is the preceding, though the following may probably answer the purpose:—

Calomel, three grains;
Jalap, twenty grains;
Golden sulphur of antimony, four grains;

mixed up with butter or lard into one dose. Three of these doses to be given—one every other morning.

A table spoonful or two of linseed oil given the first thing in a morning will frequently bring away

a quantity of worms: but it can never be depended on as an effectual remedy for the following reason:—upon the linseed oil being swallowed, those worms with which it comes in contact, that are not fastened on the intestines, but loose as it were, in expectation of food, will be brought away; but such as are fast to the intestines (and many will be always found so situated) stick like leeches, and thus prevent the effects of the oil. There is nothing so affectual as calomel. Calomel administered externally, in tolerable plenty, upon the human subject, will destroy worms in the stomach.—If the worms are situated near the anus, the calomel may be so completely absorbed, when taken inwardly, as to lose its effect before it reaches that part; some tobacco smoke blown up the anus (which may be easily done by inserting the thin end of a pipe) will most completely destroy these noxious vermin, and they will be voided most likely, in prodigious numbers.

The remark which was made on the last article would equally apply in this place, respecting the numerous remedies prescribed for the same disease. What are mentioned throughout are such as will be found to answer the purpose; and to give a number of doubtful and ineffectual recipes, for the sake of making a long list, or giving a false air of importance to the subject, would be as perplexing to the reader, as it would be contemptible and even dishonest, in the writer.

However, for worms, generally speaking, the following may be regarded as a sovereign remedy, and there are few cases which it will not effectually cure—take

Linseed oil, half a pint;
Oil of turpentine, two drachms;*

repeat the dose, if necessary.

The leaves of the walnut tree, General Hunger informs us are an effectual remedy for the worms. "In summer, when the leaves are green, they must be dried and baked on a plate before the fire, then rubbed to a fine powder with the hands. In winter when dry, you must buy them at the medical herb shop, Covent Garden. I gave my dog two largish tea-spoons full, heaped up; first boiling half a pint of milk, letting it cool, and putting the powdered leaves into it: the dog will take it well; but he will not take it in grease, for the leaves have a very strong taste and smell. By the bye, I caution all sportsmen never to give dogs milk, which has not been boiled, for it will purge them as much as a dose of physic. I gave my dog, eight days following, one dose; after which for above two months, he never voided one single worm.

"There is a peculiar excellence in these leaves; they never, in the least, purged my dog: his body was in the same state, as if I never had given him any thing. This is a vast benefit; for, as it does not purge the dog, it may be given him even when he hunts. I am told by medical men, who have studied botany, that walnut leaves are a positive poison to worms, but by no means detrimental to man or beast.

"You may observe, in the autumn, when the caterpillars and grubs eat the leaves of trees, and destroy the garden stuff, you will never see the leaves of walnut trees eaten by them: no caterpillar nor grub will approach a walnut tree. Besides, I will give you another proof of their abhorrence of walnut leaves: in summer, when the ground is so dry that you cannot dig for worms to go fishing with, fill a pail, about one-third full, of walnut tree leaves, and pour a large kettle of boiling water on them; cover the pail over with a thick cloth, and let them stand till cold; then go to a bowling green, where you observe many worm casts; spread the water over the grass, and the worms will immediately come up above the ground.—*This I have tried.*"

* I am supposing a full grown dog.

MISCELLANEOUS.

ENTOMOLOGY.

OBSERVATIONS ON THE LOCUST.

MR. SKINNER,

New Jersey, July 7, 1826.

In my last communication, I gave you the history of the beetle, and at the conclusion promised to speak of the locust. I am not so well acquainted with the locust as with the beetle, for at the time when the former made their appearance, my attention was not directed to these objects, and of course I am not prepared to state any thing definitively of their history. It is now seventeen years since these insects made their appearance, there have been, to be sure, during the interval, two other kinds of the same species, differing only in size and colour, and in the distance of the time between their winged states; one coming every seventh, one every fourteenth and those of this year every seventeenth year, but as they all perform the same offices, viz. that of destroying any green thing by their numbers and voracity, it will not be necessary to speak of them, for the history of one is the history of all.

About the first of June the locusts appeared in great numbers. They generally came up during the night, and fastened their case or shell in the fibres of posts and boards, as well as in the trunks and limbs of trees. Every one knows their manner of sloughing their skin, and some few have seen them perform the operation; but very few know that the work of destruction commences very soon after they begin to fly. Indeed, many sensible people persuaded themselves that the locust is an innocent harmless insect, which, if they do eat at all, live either on the moist or the putrescent particles of vegetables. Farther than this no one has cared to inquire. Perhaps at the time of their former appearance, some speculation arose respecting them; but it must have died away with the insect, for further than the announcement of their approach in this year nothing satisfactory remains.

Old people say that this year has produced greater numbers of them than that of any preceding year, I forget as to numbers, but I distinctly recollect that every living green thing, and even fences and walls, were covered with caterpillars the summer after the locusts made their appearance. But they gave rise to no other remark than that, "The last year was the locust year, this year is a caterpillar year." I am only speaking now of what passed before my notice. It is possible that some more distinguishing than others soon became aware of the fact, that caterpillars were the progeny of the locust, but I imagine that the inquiry was not continued.

If therefore caterpillars be the produce of locusts, in what way are they continued—how many transformations do they undergo, during the seventeen years of their remaining in the reptile state, and in what shape do they appear in the last summer previous to their becoming a locust?

If I could add the experience of those who have carefully attended to all the transmigrations of the locust for the last seventeen years, I would bestow much time and labour on a new investigation. I could then watch for signs and be prepared for any new circumstance. If there appeared a similarity in our discoveries—if I arrived at the same results by the same mode of reasoning and investigation, with those of one who had been engaged in the same pursuit—then an accurate history might be given of this destructive insect, which for seventeen years pursues its destructive career.

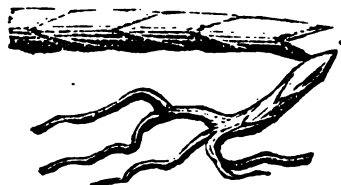
As woods and forests are unploughed, the larva of the locust remain unmolested, and it is therefore in such places that they are most numerous; for although they are in considerable numbers in orchards and on fences, yet they are scarcely in proportion

of one to 1000, nay I should say one to 10,000.—But whether it be a forest or a fruit tree, their mode of puncturing the limb of the tree is the same. As far as my observation goes, the hickory among forest and the peach among fruit trees, seem to be the most suited to their purpose.

It is immaterial to the present limited state of the question whether the *female* puncture the limb herself, and then deposit the eggs, or whether it be done by the *male*; I am inclined to the latter belief: all we need know is that in a few days the locust pierces the bark—in fact cuts through the woody fibres of the limb or twig, and then deposits a certain number of eggs. Every insect has its own peculiar mode of protecting its young, and this of the locust is as singular as any. Difficult as the operation appears, the wood is punctured, scored and the eggs deposited in less than ten minutes, and so deeply are the eggs imbedded that they require no glutinous or downy covering. Their instinct teaches them that nature will take that part upon herself, for no sooner is the tree injured, than an exudation of gum takes place, which protects the wound from the injurious effects of the weather: already are the edges of the wound closing over the eggs, and the place where they are destined to remain until the ensuing spring, will scarcely be seen in another month.

Notwithstanding my vigilance, numbers of these locusts flew into my orchards among the peach trees. I caused as many of them to be destroyed as could be caught, and thereby saved myself much after trouble, but enough remained to occupy me for upwards of a week with the assistance of two expert men.

It is easy to follow the "trail" of the locust, for in their haste to deposit their eggs, they do not sufficiently consider the nature of the twig on which they make their incision. Subjoined is the appearance of a twig after they have finished laying their eggs, and so deeply do they almost always cut into the wood, that high winds snap the twigs asunder. In this manner, dangling in the air, hang the ends of the slender branches, thereby directing your search, and enabling you not only to pull off the broken part in which there are frequently three or four distinct layers of eggs, but to cut off those layers which remain on the twig. I have cut off two or three bushels of ends of limbs in this way, and now I am employed among the thicker central branches, in many of which they have likewise left their marks.



This is a more tedious process than the first, for in many cases, it would not be proper to cut off the entire limb, as it would disfigure the tree. I go prepared for the operation. I have a great many splints made of shingles, from 4 to 6 inches in length and about $\frac{1}{2}$ an inch square in thickness; these I tie on the limb after I have cut off the whole length of cells, covering the limb and splints with a little fresh cow manure, and tying the whole up with a piece of old rag. Three persons can go over two or three thousand trees in a few days, and while so employed, the step ladders being present, a number of uncouth, unnecessary branches can be taken off, and a number of stray caterpillars and insects can be dislodged. The eggs are about the twelfth of an inch in length, of an oblong shape, and white. They lie lapped over one another in the acute angle that is formed for their bed, increasing gradually, but slowly in size, until vegetation stops: they lie torpid until spring, and then they make themselves known

in a very conspicuous manner. Farther than this I cannot say, but I hope through your paper to be informed of further facts, either as they occur from time to time, or as they have already occurred in a former period. Of one thing there seems to be a certainty, and that is, that however an insect may be transformed, it never yet has been known to assume the form of more than one kind of winged insect. But whether, during the period of sixteen years from the present, it be of one kind of reptile, or whether it change from the long, thin, green and black, smooth caterpillar, to that of the hairy one, remains yet to be known, that they do not perish as the locust do themselves, is well ascertained, as they have been traced deeply into the earth either as chrysalis or as grubs.

A SUBSCRIBER.

NATURAL HISTORY

OF THE EGGS, LARVÆ, AND PUPÆ OF ANTS.

(Continued from page 127.)

Nature has formed the eggs of some other insects in such a manner, that they are also capable of increase: such are, according to M. Vallisnieri, the eggs of the *Tenthredo*, which produce those larvæ that feed upon the rose.*

These remarkable examples authorise me in admitting the increase in size, in the eggs of ants, as fully proved; although it may not be exactly under the same circumstances as those of which the philosopher I have just quoted speaks; but if they are not surrounded with a liquid, or preserved from the influence of the external air, their pellicle, moistened every instant by the workers, may preserve a certain degree of suppleness, and the faculty of extension, according to the development of the worm they enclose.

At the end of fifteen days, the little worm is seen to quit the shell: its body is then perfectly transparent, and presents only a head and rings, without any rudiment of feet or antennæ. The insect, at this period, is completely dependent upon the workers.

I have been enabled to observe, through the glasses of my artificial ant-hill, the great care taken of these little worms, which bear also the name of larvæ. They were generally guarded by a body of ants, who, raised upon their feet, with their abdomen brought between these members, were prepared to cast their venom upon all intruders, whilst, here and there, other workers were engaged in clearing the passages, by removing the materials which were out of place; a great number of their companions taking at the same time their repose, and appearing fast asleep: but a busy scene occurred at the moment of transporting their little ones to enjoy the warmth of the sun. When the sun's rays fell upon the exterior portion of the nest, the ants, who were then on the surface, descended with great rapidity to the bottom of the ant-hill, struck with their antennæ the other ants, ran one after the other, and jostled their companions, who mounted at the moment under the bell-glass, and re-descended with the same speed, putting in their turn the whole colony in motion, so that we could observe a swarm of workers filling up all the passages; but what proved still more their intention by these movements, was the violence with which the workers sometimes seized, with their mandibles, those who did not appear to understand them, dragging them forth to the top of the ant-hill, and immediately leaving them, to go and seek those still remaining with the young.

As soon as the ants had intimation of the appearance of the sun, they occupied themselves with the larvæ and pupæ; they carried them with all expe-

dition above the ant-hill, where they left them exposed to the influence of the heat. Their ardour suffered no relaxation; the female larvæ (which are heavier, and much larger than those of the other cast) were carried, with some difficulty, through the narrow passages, leading from the interior to the exterior of the ant-hill, and placed in the sun, by the side of those of the workers and males. After remaining there a quarter of an hour, the ants again took them up, and sheltered them from the direct rays of the sun, by placing them in chambers, situated under a layer of straw, which did not entirely intercept the heat.

The workers, after having fulfilled the duties imposed upon them in regard to the larvæ, did not forget themselves; they sought in their turn, to stretch themselves in the sun, lay upon each other in heaps, and seemed to enjoy some repose, but it was of no long duration. I observed a great number constantly employed on the surface of the ant-hill, and others engaged in carrying back the larvæ, in proportion as the sun declined. The moment of nourishing them being at length arrived, each ant approached a larvæ and offered it food. "the larvæ of ants," observes M. Latreille, "resemble when they quit the egg, little white worms, destitute of feet, thick, short, and in form almost conical; their body is composed of twelve rings; the anterior part is slender and curved. We remark at the head two little horny pieces or hooks, too distant from each other to be regarded as true teeth; under these hooks we observe four little points or cils, two on each side, and a *mamelon* or tubercular process, almost cylindrical, soft, and retractile, by which the larva receives its food."

The ants do not prepare for their larvæ provisions *de bouche*, as happens with several species of bees and other insects, which provide beforehand for the wants of their little ones; they give them every day the nourishment best suited to their condition; the instinct of the larvæ is sufficiently developed, to enable them to demand and receive their repast, in the same way as the young of birds receive it from their parents. When hungry, they erect their body, and search with their mouth that of the workers, who

* What a world of wonders is there not opened to our view, in the transformations the insect tribe undergo, from the period of their birth, to the full and complete development of their several organs. Unless well assured of the fact, how could we imagine the feeble helpless worm just described, would ever become the industrious, enterprising ant, furnished with organs of motion and of flight. How devoid of probability would appear the statement, did we not possess evidence to the contrary, that the magnificent butterfly we see hovering from flower to flower, ever drew its origin from the creeping caterpillar. But these changes, surprising as they are, are yet equalled by other circumstances connected with the metamorphoses of insects, for with these changes in appearance, the animal alters its habits and mode of life. The butterfly in its first or larva state of existence eats voraciously, and in a manner greatly disproportioned to its size, devouring twice its weight of leaves in a day; in its second or pupa state, this inordinate appetite ceases, and all its active powers are suspended; in its third, imago, or perfect state, no longer bound to the spot that gave it birth, it takes a wider range, cleaves the regions of the air, and sips the nectar of flowers. That beautiful silver-winged insect (*Libellula*) now crossing our path, passed the first part of its existence as a water insect, and that little creature (*Ephemera*) we see sporting in the sun-beam, whose existence as a winged insect is limited only to a few hours, and seemingly with no other view than that of continuing its kind, has also passed the first period of its life in the same element. The common gnat, that so much annoys us in our evening walks, was originally an inhabitant of some stagnant pool. The beetle that flits along our even-tide, lay in worm-like state for a considerable period, locked up in the caverned chambers of the earth, and—but why proceed, when the whole insect tribe, generally speaking, undergo such developments.—T.

* Latreille alludes to this increase in the size of the eggs, both in these insects, and the *Cynips*.—T.

are appointed to nourish them. The ant then separates its mandibles, and allows them to take from its very mouth the fluids they seek.

I know not if these fluids undergo any change in the body of the workers, but I am far from believing it to be the case, since I have often seen the ants offer them nourishment, almost immediately after they have themselves taken it; perhaps honey and sugar dissolved in water. I presume, however, that the regimen is proportioned to the age and sex of each individual, that the aliment is more substantial the nearer the time of their metamorphosis, and that more is given to the larvæ of females than to those of the workers and males; but the questions which have reference to the quality and quantity of these aliments are of difficult solution: however, as it is of some importance to ascertain if the nourishment which the larvæ takes, has any influence upon the development of the sexes in the female of ants, as obtains in bees, I purpose making some experiments by nourishing myself the larvæ of different species. Let us at present follow the workers in the last care they bestow upon the larvæ; it is not sufficient to lay them in the sun and give them food; it is still necessary to keep them remarkably clean. These insects, therefore, who in point of tenderness to the young committed to their charge, do not yield to any of the females of the larger animals, pass their tongue and mandibles continually over their bodies, and thus render them perfectly white.* The ants have also another occupation; that of extricating them from their cuticle, which becomes distended and soft at the period of their transformation.

Previous to changing this skin, the larvæ spin themselves a silken covering or cocoon, (as is the case with many other insects,) in which in the form of pupæ, they prepare to undergo their last meta-

* As these insects evince so much attachment to the charge committed to their care, I was desirous of ascertaining if they would shew equal concern for the offspring of another species. For this purpose, I visited a nest inhabited by the little black ant, where there were only larvæ, and removed a few to a nest occupied by the yellow ant, containing only pupæ. Here they lay for a time unnoticed. At length, one or two of the ants took them up, with the intention of carrying them away, when another who appeared stationed as centinel, ran violently against and overthrew them, thus occasioning them to relinquish their hold: this part of the nest was at length deserted, the larvæ were left where first deposited, and the centinel retired. At this time not a single ant was within view. In about five minutes a little troop sallied forth, and, as if acting under some general impulse, carried off their unwelcome visitors to one of their under-ground apartments. Visiting this nest from day to day, I never afterwards saw these larvæ, and therefore, conclude they had been set apart, where from neglect they had perished. Had the larvæ been brought up in common with those of their own family, I must have known it; for, as I before said, the nest contained pupæ only. In an after-visit to this nest, I reversed the experiment, by carrying away some of the pupæ, and placing them in the nest from which I had before taken the larvæ. This done, a similar scene took place. The pupæ were at first regarded with indifference. Some of the inhabitants then attempted a removal, to which there was, for a time, strong opposition. In a few minutes, however, they were carried off to the subterranean chambers. In these experiments, there was this slight difference: in the former instance, the ants retired, as it would seem, to deliberate: in the latter, they remained the whole time within sight, a little distance from the pupæ. Had the larvæ or pupæ been suffered to remain where first placed, this would have greatly embarrassed the ants in their daily operations, this being the spot where they were in the habit of bringing their young to enjoy the sun's warmth. But why they should take them under ground, in preference to carrying and depositing them beyond the nest, is a question I can only answer by supposing they there conveyed them to insure their certain destruction, and thus prevent further molestation.—T.

morphosis. This cocoon is of a cylindrical form, elongated, of a pale yellow colour, and very smooth and close in its texture. A remarkable circumstance for which no cause has been yet assigned is, that there are ants whose larvæ never spin; but this exception only holds with those species that possess a sting and two knots on the peduncle of the abdomen. Thus, there are some larvæ which undergo their change in a silken envelope, and others which become pupæ, without lying under the necessity of spinning or weaving one.*

The larvæ of some ants pass the winter heaped up in the lowermost floor of their dwelling. I have found, at this period, very small larvæ in the nests inhabited by the yellow ant, the field ant, and some other species, but none in those of the fallow, ash-coloured, and mining ants. Those that are to pass the winter in this state are covered with hair, which is not the case in summer; affording another proof of that Providence at which naturalists are struck at every step. We do not find the larvæ of males and females but in the spring; their transformation takes place at the beginning of summer.

(To be continued.)

RYE BREAD.

"Even those (says Mr. Jacob, in his recent report on the state of agriculture on the Continent) who can afford wheaten bread, eat commonly that of rye from choice. At the tables of the first families, both in Germany and Poland, though wheaten bread was always to be seen, I remarked that the natives scarcely ever tasted it; and I have met many Englishmen, who after a long residence in those countries, have given the preference to bread of rye. From the time I left the Netherlands, through Saxony, Prussia, Poland, Austria, Bavaria, and Wurtemberg, till I entered France, I never saw, either in the baker's shops, in the hotels, or private houses, a loaf of wheaten bread. In every large town, small rolls made of wheaten flour could be purchased, and they were to be seen at the tables at which the foreigners were seated. Wheat is only used by the natives in making what our English bakers would call fancy bread, or in pastry and confectionary. If there be no foreign demand for wheat, the difficulty of selling is very great."

Upwards of 2000 hands, and 300 teams, are employed on the section of the Ohio Canal between Cleveland and Kendal, and work to the amount of between 40 and 50,000 dollars is performed in a month. The excavation and embankment are nearly completed from the portage summit to Cleveland. Of 44 locks required between the summit and the lake, the pits of 30 have been dug, and nearly half of the others are now excavating: the stone for the whole is prepared, and some of the walls have been commenced. The contracts require the completion of the whole work on this section, by the first of October. The Cleveland Herald from which we make this abstract, mentions that some alarm has been occasioned by the bad management, want of integrity, and consequent failure of a few persons, chiefly sub-contractors,

* Among the spinning larvæ, there are some whose web is marked with a black point at one of the extremities, which has been taken for the remains of the skin of the pupæ, which they reject in their preceding state; but as I have found the cocoons, thus stained, before the larvæ they contained had undergone their metamorphosis, this supposition falls to the ground. I am fully convinced it is nothing more than the residue of the aliment which these insects discharge a little time before their change.—A.

Gould is of our author's opinion; but Sir Edward King, who published a memoir on ants in an early number of the Philosophical Transactions, conjectures that it is a secretion cast out by the larvæ in its transformation.—T.

who employed labourers, and failed to make punctual payments. Arrangements have been made to prevent a recurrence of such failures. The work on the Licking summit is progressing rapidly.

[Pittsburgh Gazette.]

RECIPES.

TO PREVENT CORNS FROM GROWING ON THE FEET.

Easy shoes; frequently bathing the feet in luke-warm water, with a little salt or pot-ashes dissolved in it.

The corn itself will be completely destroyed by rubbing it daily with a little caustic solution of potash, till a soft and flexible skin is formed.

CURE FOR WARTS.

The milky juice of the stalks of spurge, or of the common fig leaf, by persevering application, will, to a certainty, soon remove them.

COURT PLASTER.

Take of isinglass, half an ounce; Turlington's (or Friar's balsam,) a drachm; melt the isinglass in an ounce of water, and boil the solution till a great part of the water is consumed: then add gradually to it the balsam, stirring them well together. After the mixture has continued a short time on the fire, take the vessel off, and spread the extended silk with it, while it is yet fluid with heat, using a brush for spreading it.

CERTAIN CURE FOR THE CRAMP.

An effectual preventative for the cramp in the calves of the legs, which is a most grievous pain, is to stretch out the heel of the leg as far as possible, at the same time drawing up the toes towards the body. This will frequently stop a fit of the cramp after it has commenced; and a person will, after a few times, be able, in general, to prevent the fit coming on, though its approach be between sleeping and waking. Persons subject to this complaint should have a board fixed at the bottom of the bed, against which the foot should be pressed when the pain commences.

TO ALLEVIATE THE PAIN OCCASIONED BY THE STING OF GNATS.

The disagreeable itching occasioned by the sting of these insects may be removed by volatile alkali, or immediately rubbing and washing the part affected with cold water.

At night, to rub with fuller's earth and water lessens the inflammation.

TO CURE THE STING OF A WASP OR BEE.

To the part affected, apply oil of tartar, or solution of potash, and it will give instant ease; as also well bruised mallows.

THE FARMER.

BALTIMORE, FRIDAY, JULY 14, 1826.

DEATH OF JOHN ADAMS.

In our last we announced the death of the illustrious JEFFERSON, because, though we keep no obituary register, it happened to reach us at the moment when our paper was going to press, and when, through it many of our readers would learn it for the first time.

We have now to add to the mournful record, that of his illustrious associate in life and in death—JOHN ADAMS. But why call it mournful? Should we not rather, under all circumstances, rejoice and be thankful, that they were permitted to remain, as Mentors to the rising generation for half a century: living exemplars in themselves of all that humanity has exhibited of wisdom in

council, patriotism of purpose, and firmness of resolution. It was not in human nature that they could do more to illustrate these virtues—their measure of earthly honours was full to overflowing; and the world never presented a more sublime moral spectacle than their simultaneous dissolution on the Jubilee of American freedom—we may sympathise with their surviving relatives, but even they will have been taught, by the glorious examples of the deceased, to submit with fortitude to a dispensation of Providence so extraordinary, in all its coincident circumstances, that, without superstition, we may suppose it was intended as a double consecration of the 4th of July, to the cause of human freedom; as a "new seal to the hope that the prosperity of these States is under the special protection of a kind Providence."

GRAIN—SEEDS, &c., FROM THE BRAZILS.—The following is another proof of the constant and enlightened attention paid by officers of our Navy, when abroad, to the best interests of their own country. If they are ready to defend her honour by the sword, they are equally prompt in "piping times of peace," to supply from foreign climes, the means of greater variety and profit to the products of our fields.

U. States' ship Cyane,
Rio de Janeiro, May 29, 1826.

Dear Sir,—An opportunity in the departure of the brig Sylph, which will sail from this port, for Baltimore, enables me to forward to you a few seeds, and of a kind which I have no doubt will take kindly in our soil. The wheat, you will perceive, is of a hard flinty kind, and I am informed is never subject to smut or to the visitation of the fly. The bean is in flavour prodigiously fine, and yields a most abundant crop to the portion placed in the earth; the seed is of a highly flavoured pumpkin, which in flavour, is very little inferior to our yellow musk melon—all of which I send to you for such distribution as in your own judgment may seem fit, should they prove acceptable.

With great esteem, yours,

J. D. ELLIOTT.

J. S. SKINNER, Esq.

SOUTH CAROLINA AGRICULTURAL SOCIETY.

DEAR SIR, *Charleston, June 26, 1826.*

The South Carolina Agricultural Society having elected you an honorary member of the society, it becomes my pleasing duty to inform you of the same. I send you a copy of the diploma and "Resolution," the originals of which are entrusted to the care of Mr. Redding, who expects to sail for Baltimore in a few days. The gold medal is in the hands of the artist, and shall be forwarded to Baltimore as soon as I receive it. I expect a month or two will elapse before I obtain it. With assurances of my personal respect,

I am, sir, your obed't serv't,

EDWARD BROWN,

Pro. tem. Cor. Sec. So. Caro. Ag. Society.

JOHN S. SKINNER, Esq.

P. S. It was on motion of Gen. Thomas Pinckney.

(COPY.)

The following resolution was unanimously adopted by the South Carolina Agricultural Society, at their meeting on the 20th of June, 1826.

This Society acknowledges the sense it entertains of the services which Mr. J. S. Skinner has rendered to the promotion of the agriculture of the United States, and of his particular attention to this Society by a donation of valuable books and other kind services; and therefore unanimously

Resolved, That Mr. Skinner be admitted an honorary member of this Society, and that the secretary

do forward to him his diploma, accompanied by the gold medal of the Society.

Extract from the minutes.

(Signed) CHAS. E. ROWAND, Sec'y.
Charleston, June 20, 1826.

DEAR SIR,

Baltimore, 4th July, 1826.

Your favour of the 23d ult. brought me the gratifying information of my having been elected an honorary member of the South Carolina Agricultural Society; and a copy of the Resolution awarding me their gold medal. I accept these honours, unmerited as they are, with a high sense of respect for the members individually, and with the more pleasure, as they were conferred at the instance of an eminent patriot; who, before I was born, had joined this Society to pioneer in the cause of agricultural improvement, as he had yet sooner done in the cause of liberty. What more powerful incentive to exertions for the public good than thus, *laudari a viro laudato?*

Please tender my grateful acknowledgments to the Society, and accept for yourself assurances of sincere regard from

Yours, very respectfully,

J. S. SKINNER.

EDWARD BROWN, Esq., *Pro tem.*
Cor. Sec. So. Car. Ag. Society.

EXTRACTS TO THE EDITOR—DATED

Waccamaw, near Georgetown, S. C.,

June 30, 1826.

DEAR SIR,

The drought during the months of April, May, and part of June, has been excessive, and our high land crops, cotton, corn and potatoes, have suffered very materially. This immediate neighbourhood being better adapted to rice than any other section of country of the same extent in the United States, we do not feel the injurious effects of dry weather in the cultivation of that staple, as we can always command the flow of the tide. Many of us, however, who have been in the habit of growing our own provisions, independent of the rice crop, will fall very far short of our usual mark in that respect.

Yours, respectfully,

JOSEPH W. ALLSTON.

WILD TURKIES.

MR. SKINNER, *North Carolina, June 18, 1826.*

Sir,—I have a promising number of "young wild turkeys;" they are exceedingly wild and shy though, much more so I think than the partridge. Can any of your subscribers, who have succeeded in raising this valuable fowl of our woods, inform me how I had best proceed.

An answer is respectfully requested, and would prove useful to many. The French call this bird *Coque De Indes*.

TOBACCO.—Inspections in the three State Warehouses during the last week:

No. 1,	180 hhds.
2,	103
3,	125
	408 hhds.

CONTENTS OF THIS NUMBER.

Thoughts on Agriculture, by Dr. Johnson—The Jumping Plough, with cuts—Rare Ripe Wheat—Planting Tube, inquiry—On the uses, properties, &c. of Milk, continued—Washing Salads—Annals of the Turf, No. V.—Diseases of Dogs, on Worms—Entomology, Observations on the Locust—Natural history of the eggs, larvæ, and pupæ of Ants, continued—Rye Bread—Ohio Canal—Recipes—Grain, Seeds, &c. from Brazil—Proceedings of the South Carolina Agricultural Society—Prospect of Crops—Wild Turkeys, inquiry.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	7 50	8		
BACON, and Hams, . .	lb.	5	9	9	12
BEES-WAX, Am. yellow	—	31	33		50
COFFEE, Java,	—	17	17½	22	25
Havana,	—	15	16½		20
COTTON, Louisiana, &c.	—	12	13		
Georgia Upland, . . .	—	10	11		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	14	16	18
Dipt,	—	11			14
CHEESE,	—	10	12	12	15
FEATHERS, Live, . . .	—	30		37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	7 00			
FLAXSEED, Rough, . .	bush	1 12½			
FLOUR, Superfine, city,	bbl.	4 50		5 00	
Fine,	—	4 00			
Susquehanna, superfi.	—	4		4 25	
FLAX,	lb.	9	11		
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	73	75		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler, & Red, new	—	80	90		
do. Red, Susque. . .	—	90	95		sales
Rye,	—	70			
Barley,	—	80			
Clover Seed, Red . . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	2 25		3 00	
Oats,	—	50	53		
Beans, White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	15		25	
HOGS' LARD,	—	7	9	12	
LEAD, Pig	lb.	6½			
Bar	—	8	8½		
LEATHER, Soal, best,	—	22	23	62	
MOLASSES, sugar-house	gal.	46		62½	75
Havana, 1st qual. . .	—	32	34	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter . .	—	70	75	88	
PORK, Baltimore Mess,	bbl.	11 00	12 00		
do. Prime,	—	8 00	9 00		
PLASTER, cargo price,	ton.	4 00			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, . .	—	5½	7½	8	12
WHISKEY, 1st proof, .	gal.	29	31	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	36		50	
SUGARS, Havana White,	c. lb.	12 50	13	15	16
do. Brown,	—	8 50	9 50		
Louisiana,	—	7 50	9 50	10	11
Loaf,	lb.	19	22	20	23
SPICES, Cloves,	—	70	75	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	16		25	
SALT, St. Ubes,	bush	43		75	
Liverpool ground . . .	—	45		75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 15	1 20	2 00	
Lisbon,	—	1 15	1 20	1 50	1 7
Claret,	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bld	lb.	30	35		
do. crossed,	—	20	22		unwashed
Common, Country, . .	—	15	20		but free
Skinner's or Pulled, .	—	20	25		tags.

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AGRICULTURE.

ON THE VALUE AND USE OF OXEN IN COMPARISON WITH HORSES.

SIR,

Frederick county, Virginia, April 4, 1825.

I have ventured to become a candidate for your liberal offer of a silver cup "for the best essay on the value and use of oxen in comparison with horses in the middle and southern states;" in doing which I am prompted less by the expectation of success, than by the desire of performing a citizen's part in convincing our countrymen of the great importance of working oxen in preference to horses generally, where the climate is not too warm for them, and where in all kinds of labour they have not been excluded by the fairest comparison. And as it is probable you will be presented with a number of practical essays, an opportunity will be offered to embody from them, all such facts and remarks as have the most useful bearing on the subject, which I must suppose will be highly gratifying to any one evincing so much interest as is manifested in your proposal. The experience of our northern brethren, in that line, gives them an opportunity of a better acquaintance with working oxen, their properties, and valuable uses, and I am sure they cannot refuse for so honourable a reward, to give you a full and just description of them—though I am not fully aware as it regards the comparison, whether the same care has been taken in districts where the ox is most celebrated, to bring the horse to the same degree of perfection. It was in Massachusetts that I first witnessed their great strength and docility, their patient endurance of many miles travel through snows into the frozen swamp, returning late, heavy laden with wood. I have been in the habit of using them for twenty odd years on a farm of 350 acres cleared land, and know more of their value than I can express in terms adequate to their importance. Nevertheless, I believe it is in vain to say that the very best oxen are equal to horses for the wagon, plough or harrow—though I do, without hesitation, declare, consistently with my own experience, that we should depend greatly on oxen, keeping no more horses than are absolutely necessary to plough the ground and furnish one wagon team on a large farm; on a small one oxen should be used for every other work than ploughing. One bar-share of three horses is sufficient for a farm of 3 or 400 acres, breaking up annually one fourth part of the whole, with six good oxen in addition. The same sized farm frequently employs two bar-share teams, and a wagon set, besides horses enough to eat up all the grain they make, and destroy much of the grass that should be turned into hay for oxen. In order to keep up such a number of horses, resort must be had to the ruinous system of purchase, or the keeping an additional number of young horses to reinforce with, which greatly adds to the deteriorating system.

The comparison required being between oxen and horses of the middle and southern States, and being an inhabitant of one of the most northern of the latter, I feel peculiarly situated, however illy qualified to draw an instructive comparison; for I am aware if the subject were done justice to, it would lead into an extensive train of reasoning, and require no little practical detail of husbandry. In much of our northern and eastern country, economy of cultivation is so essential, hay so much more abundant than grain, that work cattle are identified with the soil—the climate is suited to their constitution. To the south, where the lands are light, an active horse is equally suited to their soil and climate; horses of even a small size, and mules in their place, are more valuable than oxen, which cannot perform the active labour in a hot sun, through a long day, in a scorching soil, and

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perhaps scanty food. Steady, hard labour belongs to the ox; if he goes slow, he carries a great burden, and must have plenty to eat for his faithful labour. If, then, to the north he is most valuable, and the horse to the south—may we not rationally conclude that on the middle ground they may be associated with extraordinary advantage; and in that portion of our happy country we may, by judicious management, succeed in making it again what it once was, the finest part of the old thirteen. I will attempt to shew, that if a spirit prevailed for the use of oxen to a more considerable extent, that our breed of cattle would, with the soil, be much more speedily improved. The middle and southern country, to a certain extent, are dependant on the west, annually, for large droves of horses, demanding cash in payment, which it is true they cannot now get, but must eventually be paid to the great injury of the purchaser. Does not the inability to pay, prove the impropriety to purchase in this case? When the price of small grain was high, the expenditure was more tolerable. It is time to adopt a more economical mode: let us raise a few large horses, and plenty of heavy oxen. It is notorious, that a team of four oxen may be purchased as cheaply as one horse, while the former is subject to fewer risks of every kind. If a horse costs \$100, oxen of a corresponding quality may be had for \$25 each; if a horse of inferior kind costs 60 or \$80, the ox may be bought at 18 or \$20. There is almost a certainty of the ox enduring eight or ten years, and then paying back his purchase money every cent, frequently more, and sometimes double. The horse, from the number of his liabilities, will not, I believe, average ten years from the time of his purchase; perhaps little more when raised; and when he dies we get only his poor hide. But admitting that a farmer raises both of the best kind; a horse at \$100, the ox at \$33 $\frac{1}{3}$ —then there is three for one. For my own part, I value a pair of good oxen as highly as any first rate plough horse. The difference of cost in their keep is great: (so many minute calculations have been exhibited of late on that score,) I will not meddle with it further than to say, that from two to three oxen may be kept to more advantage, and at less immediate cost, than a single horse; and although a pair of oxen may consume double as much hay as the horse, there is double the manure made, and that of better quality, to carry on an improving system. Whereas the consumption of grain by a horse produces the necessity of costly labour to keep up a necessary supply, and where corn is the principal horse feed, materially injures the soil. An established conviction, that oxen can be made to answer a more valuable end in exchange for a part of our horses, would lead to important results. Our breed of cattle would be improved generally; those intended for the yoke would be selected for such peculiarities as would best adapt them to the purpose; fewer horses would make room for more and better cattle; less grain would be cultivated—or, rather, less land in grain, but in fact more grain; more land will be left for pasture, and hay, the chief food of oxen; less labour will be expended, more profit reaped; cows will be seen returning from their more abundant pastures laden with milk, to supply a dairy, or make their calves large, and give them early maturity. Without a plentiful dairy, too, there is a necessity for an increased cultivation of grain to feed the hogs for the use of the labourer, and he requires an addition of meat when he does not get plenty of milk. In the summer, the knolls are enriched by penning them thereon; in the winter, large quantities of the best manure is made in their pens; for large fat cattle make more and better manure than small lean ones.

Now, if it be a fact, that oxen in great part, can be more economically and profitably used than horses, the great advantage of improving them fol-

lows of course, which will naturally lead us into a system of farming more fertilizing and less laborious. In what has been said, or what may be said, let nothing be inferred that the horse is undervalued; but that the use of this noble animal should be confined to certain labour which he is better adapted to than the ox; that the number should be limited, and their size and form made the subject of particular interest, that a pair of them may perform the same quantity of labour, with ploughs of improved construction, as three are in the habit of doing at present. Touching then, immediately, the subject of their comparative value in the middle states,* I consider the horse as much more valuable for the plough of any kind, the harrow, and wagon, when hauling to a considerable distance—as I do the ox for the rest of the labour performed on a farm, treading wheat excepted, which labour is now done, in a great measure, by machinery. Hauling of all kinds, either in wagons or carts, particularly in the transportation of manure, where four oxen have, in a properly constructed cart, as decided a superiority over the wagon and horse team, as the latter have over the former in ploughing. If oxen are slower than horses, their steadiness, strength, simple gearing, which renders it so speedy a change from one cart to another, and advantageous mode of delivering their load by a tilt, and off again without loss of time, is the cause of their superiority; and this done with a broad wheel cart, costing not more than half as much as the wagon; of which, and its peculiar adaptation to the hauling of wood, manure, stone, &c., I shall endeavour to make useful by an explanatory drawing, not knowing whether this particular construction is known off my own farm.

I had formerly been in the habit of using long narrow bodies, high wheels with narrow tire: but such wheels cannot be made strong enough for heavy oxen; they twist them in turning around, nor are they fit to go over cultivated grounds. The high narrow bodies are unhandy to load in, equally so to unload, as a broad wheel cart, which they will not discharge the load freely; whereas a body short and very wide, will carry much more manure, and tilt with ease, besides affording less labour to the team. I have endeavoured to accommodate their gear, carts, and labour as nearly to their nature as possible, not forcing or expecting more of them than they can truly perform. It is certain much is to be done by management, and there is a great advantage in a suitable breed. I have occasionally had an ox to retard the progress of the whole team, not having a form corresponding with the rest, to enable him to keep up in a quickened pace; but the same difference will be met with in horses also. A simple mention of a few of the many advantages attending oxen, and I am done with their eulogy.

They are rarely ever known to be either lame or blind; I have not, in twenty years, lost one by disease or poverty; they do not jump and trespass like horses, (except my old Lion;) but their lameness, if incurable, or blindness, or mischievousness, do not prevent them from making good beef.

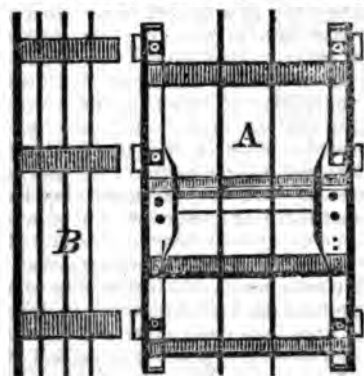
My decided opinion is, that ninety nine farmers out of a hundred will do better in the use of oxen with horses, as here recommended—but I will not disguise that there are some few, whose wonderful energy and management have demonstrated (especially in extensive grain cultivation) that horses pushed to a certain age, and then sold to give place to other prime ones, have succeeded in doing more than could have been done under any other circumstances—the hauling of produce to market 50 or 70 miles, is considered in these exceptions. Some argue, we will not keep oxen, for our horses must be fed, work or not, therefore we will keep them ex-

* I consider Virginia in point of climate, soil, &c., a middle state.

clusively at work—but it is not the fact; hay or grass will keep horses fat when they are not at work, and the economy of oxen not only consists in the saving of grain in not eating it themselves, but in rendering it unnecessary that the horse should—further, they are a necessary relief to the horse whose powerful energies should be called forth at certain seasons, particularly during the spring and fall, when a good three horse team should not plough less than from two to two and a half acres per day; rest should then ensue for a while, then light labour, and rich grazing will make them young for another ploughing tug—after which but little grain is required with an abundance of rough food and hay, which, if properly administered, will make a large quantity of the best manure. Horses thus kept, will live longer and at less expense.

The yoking and breaking of oxen comes next under consideration, but so much has been lately said on these subjects in the American Farmer, I will touch but lightly on them, and proceed to state my experience of the kind of cart best adapted to their labour. I have usually broken them at between two and three years of age, by working them gently between the wheel oxen and leaders, gradually introducing them into harder labour by putting one at a time behind, or before, wherever their station may be intended. Their yokes are constructed with a view to have as close a bearing on the neck as possible, and the bows inserted with a like view. Query: as some insist that oxen can draw most by a rope attached to their horns, would not the experiment be worth making, that of fixing the rope round the horns and to the yoke, in order to relieve the shoulders of part of the pull, when the pressure has become great?—though I confess I feel satisfied with the present mode.

A much more important consideration is to possess carts of easy conveyance to them, and abundant in the transportation of manure, &c. for I have often heard farmers say, they had plenty of manure but could not carry it out. I have never been able to haul as much as I could haul out in good season to plough in before it was too much exposed to evaporation—then, as the facility of removing it is as necessary as the making, I would offer the annexed plan of a cart for 4 or 6 oxen, two of which will cost less money than a good wagon, requiring so much less iron and mechanical labour. The state of perfection (I imagine) I have brought them to, is the result of twenty years observation, casting off many before worn, altering and amending from time to time, but perhaps I have yet to learn much on the subject; if so, may this occasion bring it to light. The axle tree should be very strong, and not morticed for the tongue, which should be so stiff as not to bend at all, the tire 4 inches, wheels about 5 feet high—the body A just



8 feet long from end to end of the main rails, which should be stout and of good white oak, with additional rise in the middle to admit of a portion being rounded out for the hub to turn under. It is by this means the body acquires width, and will carry more

and easier than a long narrow one—will also tilt and be replaced with ease. The width of the body may come within two inches of the spokes below, and the side boards to lean so as to be nearly parallel with the spokes of the wheel—it should be 6 inches wider behind than before; a light moveable bottom battened together and chained to the fore slat is to be used for hauling manure, &c.—and the side boards represented by B are to be put into the staples on the outside of the rails of the body, which are 9 feet long, as is the floor of the cart. The sideboards are 2 feet high above the staples. When the nature of the hauling requires it, a slight gate may be affixed at pleasure on the fore part. Pins with shoulders are driven about three inches deep into the under part of the rails on each side of the axle, to prevent the body from going too far one way or the other. This is better than any iron work for a cart independent of the economy—the staples are driven through immediately on each side the two inch auger holes intended for standers in the hauling of wood, rails, &c.; and will prevent the greatest pressure from ever opening the timbers.—The convenience and economy of this manure and wood body, as I call it, must be so evident, that I will not trouble you further than to observe, that the staples and four bands at the ends of the rails, is all the iron work it requires. It is rapidly disassembled and stowed away after use. For other purposes, a light close body, 9 feet long, or 10, according to circumstances, is used for the hauling of wheat, corn, &c.; six barrels of corn in the shuck I have frequently hauled. To this body is attached ladders for hay, wheat, &c. &c.; and an additional one is used almost exclusively for corn stalks with the tops and fodder on, 15 feet long, consisting of rails, slats, and very high standers. This body conveys more of the materials of manure from a good corn field than can readily be conceived by one not accustomed to its operations. In conclusion, it will be almost unnecessary to add, in connection with the economy of using oxen, that any system in the present state of our agriculture, that will have the effect of reducing its expenses, and at the same time enhance its profits, both immediately and remotely, and insure a certain improvement of the soil, must be considered preferable to the extensive, uncertain and unfertilizing system of grain raising, which has been my desire to prove, through the medium of the labour of oxen, the repose of a greater portion of land in grass, and a greater quantity of hay as the cheapest and least exhausting resource of manure; the security for a greater crop of grain on less land.* Have the goodness to pardon this rough sketch, for writing is not my trade, but practical farming, which, I think, I pursue with more pleasure than almost any man in the world.

I am, very respectfully,

Your obed't serv't.

RICHARD K. MEADE.

ON THE CULTIVATION OF TURNIPS.

After fifteen years experience, I recommend the following practice, which, if carefully followed, may be made a certain, and not an uncertain crop—as is mostly asserted.

The land suited to this crop ought not to be rich, but of a medium fertility, and pulverized by repeated ploughings and harrowings, until very fine; as near the consistency of pulverized virgin soil of new land as possible, and the turnip crop will very suitably succeed all early spring crops, such as potatoes, peas, radishes, beans, and clover after the first mowing, and will do without manure, provided the four first enumerated have been manured in the spring.

* And best recipe for destroying the Hessian fly.

MANURE.

A small dressing of manure is necessary, say ten ox cart loads to the acre, of ashes or old cold manure, such as yard shovellings, &c.; unfermented manures will spoil the crop by making it run to top, rendering the roots hot and spikey.

SEED AND ITS PREPARATION.

This is one of the most important parts to be attended to; without good true seed, all the other labour is lost. I am frequently offered seed by the bushel, which is acknowledged to be saved from the refuse turnips, which, if one is suffered to go to seed among twenty good ones, will spoil the whole. With such seed it would be as impossible to raise good turnips, as it would be from radish seed.

In order to hasten vegetation, and by that means escape the ravages of the fly, it is best to soak the seed in rain water twenty-four hours; but if wanted sooner a few minutes in warm water will do. It is strongly recommended to soak the seed in lamp oil, which is said to impart a disagreeable flavour to the seed plant, which saves it from the fly. After soaking the seed, it ought to be rolled in plaster, or ashes, to dry them; and for sowing broad cast, I mix three half pints of seed with a bushel of the mixture to the acre; but those who have Bennett's drill may sow the naked seed in rows about twelve inches apart, by closing every other slide, which will save much time in hoeing.

TIME OF SOWING.

In the neighbourhood of Baltimore, if the turnip seed can be got up quick, it will do to sow as late as the 25th of August, for table use; and for stock, it would be well to sow from the 25th of July to the 10th of August. Two weeks later will do on the tide water and in old Virginia; the ground being well prepared, the manure spread when necessary, once ploughing, and then immediately give the ploughed ground one stroke with the harrow; then sow the seed while the ground is damp, and give it one stroke with the harrow, and the plants will soon appear. After they are up, should the fly be destructive, roll them with a roller. As it is apt to be dry at this season of the year, it is best to sow a little before or soon after a rain, to get the plants up; otherwise the seed often perishes; but sowing on fresh ploughed ground is a great advantage.

HOEING, &c.

After the plants are up and the largest leaf has grown as large as a cent, run the harrow through them, which breaks the crust, buries the young weeds, and moulds the plants; and from the three half pints of seed, if the fly has not been destructive, there will be plenty of plants to admit of the harrow being run each way, which puts the ground in fine order among the plants: then commence with the all-important work of hoeing, without which all the other work will be nearly lost. Each hand must take about five feet wide and use the hoe actively, and single out the plants as near twelve inches apart as can be done by the eye. This is a tedious operation; but four or five hands, sticking close to it, will soon learn to do the work quick, and get over a large piece of ground in a day; and after it is done, there will be one single plant to each foot of ground, instead of a dozen to the foot in some places, and only one to the yard in others, as is the case when the seed is sown this, and left without hoeing or thinning; in consequence, in one case they will be too thick to grow, and in the other will not grow for want of culture. The white flat or white Norfolk is the best kind for early use; and the ruta baga, and yellow bullock, for late use. Either of these ought to be sowed earlier than the above—the first a month, and the latter one or two weeks. The white stone and tankard turnip, are good kinds, particularly the latter, as it grows to a great size and is sweet.

ROBERT SINCLAIR.

MOWING MATCH.

On the morning of the 4th inst. many of the farmers and other inhabitants of Stratham, assembled at the Plain's corner, to witness the novel exhibition of a mowing match. The premium was an elegant scythe, by which the work was executed. The rule was previously established that no candidates should be accepted, excepting those between the ages of 18 and 21; that after the work was executed, it should be measured, and the three best mowers should again perform the task. Three judges were appointed: Major Benj. Clark, Major David Robinson, and Capt. Joseph Smith, with liberty to the mowers to select two additional ones, if they should think fit.

When the work was executed by the nine mowers who had presented themselves as candidates, it appeared that Messrs. Benjamin F. Clark, Nathan L. Morrill, and Benjamin Kelly, had done the best minutes mowing; and the work was again performed by them, when it was declared by the judges, that Mr. C. had mowed in one minute 45 strokes, 8 feet swathe, and 101 feet in length; being 808 feet square; Mr. M. 50 strokes, 7½ feet swathe, and 103 feet in length; being 796 feet square; and Mr. K. 48 strokes, 7 7-12 feet swathe, and 107½ feet in length, being 813 feet, and one quarter square; and Mr. Kelly accordingly received the premium. The thanks of the company were tendered to the gentlemen who acted as judges; to Capt. Smith for the use of his field; and to Rev. Mr. Cummings, for an elegant and appropriate address delivered by him upon the occasion.

Previous to the dissolution of the meeting, Major Smith, aged 80 last autumn, mowed one minute, and cut over a surface of 803 feet square. The work was executed by him with great ease, and he was rewarded by the applause of all present, and with a badge of respect and honour. It is proposed to continue these meetings; and we shall endeavour in our next paper, to give some further account of the plan. We regret that our limits will not allow a more extended notice of this first exhibition of the kind. *[Exeter Gazette.]*

EXPERIMENTAL FARMS.

The science of agriculture and gardening is advancing rapidly. Several extensive experimental farms are in operation in this section of the country with very excellent results. In New Jersey near New Brunswick, is a farm under the personal care of a proprietor who unites all the requisites of a scientific and practical horticulturist. Within the last four years, seven thousand trees have been planted under the direct inspection of the owner, who has converted the whole farm into a garden. As an instance of the success of the experiments made, and of the excellent cultivation it is under, it may be mentioned that apricots have been gathered this year from it, measuring six inches in circumference. *[N. Y. E. Post.]*

PROSPECT OF CROPS.

Extract of a letter from Caswell county, N. C., dated July 8, 1826.

"From the time the corn crop was planted up to the 20th of May, we had dry weather, which enabled us to keep our crops clean. On the 24th of May we had abundant rains, and from that period up to the present time I have never witnessed such seasonable weather. A warm sun and frequent showers, sometimes two and three times a week, has forced rapidly forward the corn crops, which are decidedly the finest we have had for many years. The wheat crop, on manured lots, was an excellent one, the heads being well filled and the grains large and plump: the wheat, on corn ground, gave a thin

crop as to the number of stalks, but they were well filled. The oat crop, on bottom land, very good; but on high land the crop was too far spent before the wet weather set in. The young tobacco was also very promising; but this fine prospect has been much altered for the worse by a high freshet which lately took place in Dan river, which has destroyed nearly one half of the corn, oats, and young tobacco crops growing on the river bottoms."

LADIES' DEPARTMENT.

NUTRITION—FOOD.

(Concluded from p. 132.)

Necessity or selfishness, then, must be regarded as the chief motive to a mother's withholding from her infant the enjoyment of its natural sustenance. When, therefore, either of these states is found to admit of no other remedy, the offices of a proper nurse ought to supply those of a less fortunate parent: and in the selection of such a substitute, an attentive exercise of the judgment and of experience is requisite. That person, who aspires to hold the situation of a nurse, should be distinguished by qualifications which peculiarly fit her for the faithful execution of the charge she expresses a desire of undertaking. She ought to be young, and modest and healthy—neat in her dress; cleanly in her person, active in her habits; temperate in all her desires; have a candid disposition, a cheerful temper, and an instructed mind. Her teeth should be white and clean; her gums sound and florid, the odour of her breath agreeable; that of her insensible perspiration inoffensive; her nipples rosy and small, but readily swelling from excitement; her breasts smooth and prominent rather oblong than large. Her milk ought not to be more than four months old, because it then becomes less digestible by the stomach of a new-born babe; it should flow with readiness, be thin and bland and abundant, and have a bluish tinge, with a sweetish taste. It is necessary that she be perfectly free of every hereditary or constitutional taint or manifest disease, and altogether blameless of every practice requiring concealment; that her character be eminent for patience, equanimity, kindness, and obligingness; and that she show herself to be fond of children, dexterous in managing them, watchful during their sleep, and capable of undergoing fatigue and want of rest without injury to her own health.

Women having a brown complexion generally yield milk in profusion: theirs, also, is rich and nourishing. That of fair persons contains less of the pure alimentary principle, and has been considered as having a tendency to create heart-burn in some infants, and in others a weakening frequency of their dejections.

Moderate and regular exercise, in the open air, imparts energy to the vital powers of females giving suck; and, from this, their milk derives a better quality, has the proportions of its component elements more equalized, and is made less susceptible of going into sudden coagulation within the stomachs of their charge. They themselves should subsist on a light generous diet composed of a due mixture of animal and vegetable substances,* accompanied with the free use of refreshing drinks:

* Dr. Struve, in his tract on the Education and Treatment of Children, gives the following prescription:—"Let two parts of milk rise over a low fire, and add one part of well-fermented beer, previously boiled: sugar may be added to this if desirable. This beverage is to be taken cold: it has been attended, he says, with the greatest advantage by women who were already so exhausted, that they thought it impossible to continue suckling their children: they became replenished in a short time, and recovered their strength with a continued increase of milk."

but, in all this, particular regard should be had to the individual's natural temperament and previous habits of life.

Beyond the mother's milk, an infant requires no other sustenance till after the first teeth have begun to appear: the development of these is generally co-incident with that of the stomach's powers, and thereby seems to indicate the want of more solid nourishment. Previously to this change, which usually happens between the fourth and sixth month from birth, artificial foods almost always disagree with the digestive organs, and excite internal pains, sometimes disease. In the mean time, it should be admitted to suck only at stated intervals of about four hours: and, on each occasion, be allowed to drain the breast. Frequent sucking, especially during the night, is unfavourable both to the babe's prosperity and the health of its mother, who never ought to permit its lying asleep with the nipple in its mouth.

Infants, as their dentition advances, may have the quantity of prepared aliment, superadded to the natural, gradually augmented. Such forms of it are preferable as consist of milky and farinaceous substances, agreeably sweetened: of all these recent cream of cow's milk diluted with whey, and arrow-root, appear, from experience, to be the most congenial.

Preparatively to its final discontinuation, the nurse's milk requires being exhibited in lessening proportions as well as at more distant returns. Vigorous and healthy children may be weaned, as convenient, in their eighth or tenth month; but such as are puny, delicate, or diseased, should have this change deferred to a later period, determinable entirely by the strength of their assimilative and constitutional powers. According to the peculiarities of their nature, all children are more or less affected by the transition to their new diet; it, therefore, becomes the duty of their mothers most solicitously to watch its general effects on their sleep, appetite and dejections, for the purpose of having the slightest disturbance of the system counteracted in its rise.

Milk of the cow ought invariably to constitute a chief ingredient in the food of children, for many months after the suckling state has terminated. Light dishes, prepared in the usual manner, of flour, oat meal, biscuit or powdered bread, rice, arrow root, tapioca, manna croup, sago milk, salep, soft boiled eggs, animal jellies, isinglass boiled in milk, beef tea, soups made from chickens or veal, and fishes of the least oily kind, may at the same time be given to them, in varying quantity and richness, according to their rising age. Wine, even the mildest, excites the whole organic nature of infants, by farther accelerating the rapidity of its vital movements; nevertheless, some of it, diluted and sweetened, may be occasionally administered to pale, languid individuals possessing a sluggish constitution: such are often predisposed to have intestinal worms, to the growth of which the wine may prove unfavourable. Coffee, tea, chocolate, and fruit,* are not necessarily unsuitable to the circumstances of infants and children, more than to those of persons in riper years: each of them is naturally refreshing and exhilarating, and their effects first on the assimilating, and ultimately on the nervous organs, must alone determine the propriety of their use being continued. After passing the second year of life, the infant begins making rapid approaches, in the developments of his organization and his mind, to what shall afterwards dis-

* Ripe fruit conduces, in no manner of way, to the production of intestinal worms; and, it is a pure error to confound the larvæ of insects seen in worm-eaten fruit with the animals that infest the human bowels: the former never, cannot indeed, give birth to the latter; no two things in nature are more distinct.

tinguish their character in youth and manhood; the manner, therefore, and the kind, and the proportions of his nourishment, should be modified, by concomitant advances, so as to suit the changes of his ever-varying conditions.

Nature, in fine, has provided, that such sustenance and such cares should be requisite to the proper management of man's earliest infancy; that parent then who best fulfils an intention so wise and so beneficent, at the same discharges best an important and praise worthy duty to nature, to herself, and to her beloved offspring. It is not enough, however, that children be taught, (solely by the dread of derangement in their health,) to place restraint on the movements of young desire: it ought to be strongly and permanently impressed upon their judgment, that the preferring certain kinds of food to others, merely for the love of them, is a degrading and sensual appetite, which temperate men have always hated, and the virtuous despised.

SPORTING OLIO.



(From the Petersburg Intelligencer.)

ANNALS OF THE TURF—No. VI.

Respectfully inscribed to the Amateur, the Sportsman and the Breeder of the Virginia Turf Horse.

"The transcendent consequence of the horse to man in every possible stage of human existence, has been the invariable theme of writers on the subject from the earliest records of time. Indeed it is impossible to conceive any other, out of the vast variety of animals destined by nature to human use, which can, with the least prospect of success, dispute with the favourite horse the palm of his master's predilection and attachment. It is an attachment of a truly rational nature, and to a most worthy object. The very idea of being supported at ease by an auxiliary and borrowed animal power, and of being safely borne from place to place, at will, with a pleasant and gentle motion, or with the rapidity of lightning, must have impressed the minds of the first discoverers of the mighty benefits of the horse, with ineffable delight. Such sentiments and feelings respecting this noble animal have been constantly entertained and handed down to us from the earliest ages. The general beauty, the harmony of proportion, the stateliness and delicacy of the superior species of this paragon of brute animals, could not fail of inspiring admiration in the breasts even of savage and untutored men. Time and the improving faculties of man, gradually developed the various uses and qualifications of the horse. Endowed by nature with a portion of intellect, with a generous pliability of disposition and fortitude of heart, with vast and energetic bodily powers, he was found capable of bearing a sort of social part in all the pleasures and labours of man. He was associated with his master in the pleasures of the journey and the chase; he shared willingly and with ardour in the dangers of the martial field; and with a steady prowess, partook in the humble labours of cultivating the soil for mutual subsistence. By the most illustrious nations of either ancient or modern times, the horse has ever been esteemed of the highest worth and consequence, and treated with a distinction and attendance befitting his rank as the first of domestic animals, approximating in society and service to human nature. It is among the most savage and debased tribes of men only, that the breed, condition and comforts of this noble animal have been neglected."

This quotation, from a very splendid English work on the blood horse, is no less just in sentiment than beautiful in language. It is proposed in this number to treat of the value of the blood horse to our common stocks, and of the various uses to which his conformation adapts him. It has at every period been fashionable with a certain class of moralists, who were more rigid than correct, to decry the sports of the turf; and, further, to contend that the breed of horses having received all the improvement of which it is susceptible from the blood horse, the further propagation of the latter is useless; they would further have horse racing abolished, and the horses applied generally as stallions. But the use which these sort of reasoners would propose to derive from the racing breed, would soon destroy itself. They do not consider that in racing the necessity for *thorough blood* is obvious and imperative, and such is a sure ground of its preservation. Were the sports of the turf to be abandoned, that *unerring test*, by which to ascertain the purity of the blood, and the other requisite qualities of the race horse, would be lost; and, consequently, that glorious and matchless species, the *thorough bred courser*, would, in no great length of time, become extinct among us—and with him all his noble and valuable properties, and his place be supplied by a gross, ill-shaped, or spider-legged mongrel, which would insure the degeneration of the whole race. I would ask, is not a cross of the blood horse upon the common stock indispensable to insure us light footed and quick moving saddle horses? Where do we go for the parade or cavalry horse, if it is not to the blooded stock, or to those highly imbued with that blood? Did not the speed and wind of the cavalry horses of Colonels Lee and Washington, during the revolutionary war, give those commanders a decided superiority over the enemy in the kind of warfare they waged, where celerity of movement was all-important: and were not those horses procured in Maryland and Virginia, and partook of the best racing blood of those states? The value of the blood, or southern horse, from their ability to carry high weights, was strongly exemplified in the wars of the ancients; as they rode to war in heavy armour, and always selected and preferred for this purpose their highest bred horses, which were also frequently covered, like their riders, in heavy armour. In former times in England, their hunters were only half bred horses; but later observation and experience have fully convinced them that only those that are thorough bred (notwithstanding the popular clamour of their deficiency in bone,) are adequate in speed, strength and durability to long and severe chases with fleet hounds, particularly over a deep country, and that they will always break down any horses of an opposite description that may be brought into the field.

The value of the racing blood when crossed upon the common cart breed is also apparent in making them superior in the plough and wagon, provided they have the requisite size, arising from quicker action and better wind, particularly in the long hot days of summer. There is the same difference of motion between the racer and the common bred horse as between a coach and a cart. It is moreover a fact, although not generally known, that no other horses are capable of carrying with expedition such heavy weights; and were "a thirty stone plate (420 lbs.) to be given, and the distance made fifty miles, it would be everlastingly won by the thorough bred horse. There is only one way in which a bred horse would be beat at high weights; it would be (to use a queer phrase,) to make it a stand-still race; in that case I would back a cart horse: I think he would beat a racer by hours."

The strength of the race horse and his ability to carry high weights, arise from the solidity of his bones, the close texture of his fibres, the bulk and

substance of his tendons, and from his whole peculiar conformation. His superior speed and endurance originate from his obliquely placed shoulders, depth in the girth, deep oval quarters, broad filets, pliable sinews, and from the superior ductility and elasticity of his muscular appendages.

It is also from the blood horse that we acquire fineness of skin and hair, symmetry and regularity of proportions, elegance and grandeur. As a proof of the latter qualities, the highest dressed horses of the ancient emperors were invariably of the highest cast of Arabian or southern blood.

The object of the preceding remarks was to shew the impolicy of discouraging the sports of the turf, as being the indispensable test by which to try the purity of our blooded stock, and the only certain means of insuring its preservation: that the thorough bred horse was, beyond all question, the most useful species of the whole genus, since he was applicable to every possible purpose of labour in which horses are used, either for the saddle, for war, parade, hunting, the road or quick draught, and even for the laborious services of the wagon and plough. It now only remains to make some remarks (as connected with the above topics) on the standing and prospects of future patronage which the sports of the turf have in England and this country. It is an undeniable fact that the high degree of improvement to which the blood stock of horses in England have attained, is mainly owing to the liberal and weighty patronage which has invariably been extended to the sports of the turf in that country; it is patronized as a national amusement by the royal favour and munificence, and directly encouraged by the most distinguished nobility and gentry: by men who are ranked as her chief statesmen. The decline of this sport has frequently been predicted in that country, particularly at unfortunate periods of war and distress; but it has been steadily maintained for more than a century, with few or no fluctuations, and is at this time in a high state of prosperity. Never were so many thorough bred stallions kept in England as at present; never was Newmarket, Epsom, or Doncaster, better attended than at the late meetings. The number of blood horses annually exported from England is unusually great; and to her, Russia, France, Austria, the United States of America, the East and West Indies, have been long indebted for their most valuable stocks.

In Virginia the sports of the turf have been revived, and are extending over the state with great spirit, and are infusing into her citizens a due sense of their importance in giving value to the race horse. Virginia has long held a pre-eminence over every other state in the Union in raising fine horses—and it is mainly to be attributed to the passion for this fascinating and rational amusement, and to the steady encouragement given to it at all times, both during adverse and prosperous times, since the state had its foundation in a colony. To her the Carolinas, Georgia, Kentucky and Tennessee have always looked for a supply of blooded stallions; to her they still are indebted, as well as the new states of Alabama, Louisiana, Mississippi, &c. Let then Virginia maintain and increase this celebrity by adopting all means which are calculated to promote so laudable a distinction: let her place and extend the sports of the turf on the most liberal and equitable basis, and let her, in order to give increased value to her racing stock, speedily publish a Stud Book.

AN ADVOCATE FOR THE TURF.
(To be continued.)

DISEASES OF DOGS.

CONVULSIONS OR FITS.

Complaints of this nature are sometimes caused by an accumulation of worms in the stomach, which in the first stage create giddiness, and end in violent

convulsive paroxysms. When the complaint is to be attributed to worms, the animal will have an itching at the nose and fundament, and will sneeze frequently. In this case, the best treatment is what has been already prescribed for worms. When convulsions proceed from other causes, which will be generally known by a wild appearance in the animal's eyes, frothing at the mouth, when labouring under the most violent paroxysm of convulsion, the dog may be recovered by being thrown into the water, perhaps a bucket of water thrown over him might answer the purpose: but this is merely a temporary relief; and to eradicate the disease, recourse must be had to something more effectual. In the first place, the animal should lose a few ounces of blood (from three to six ounces, according to his size and strength,) when the following should be administered:—

Jalap, one scruple;
Cream of tartar, half a dram;
Water, one ounce,

mixed; half taken the morning after the dog has been bled; the other half in two hours after, well shaken:—a rowel should afterwards be put in the neck, and kept open for a considerable time: the following should then be given:—

Peruvian bark, half an ounce;
Water, half a pint;

boiled for a few minutes and strained; then add, sweet spirit of nitre, one dram: a table spoonful to be given every two hours, the animal afterwards to be kept on a mild nourishing diet.

When convulsions arise from indigestion, the following has been generally found efficacious:—from two to eight grains of tartar emetic (according to the age and size of the dog,) and in two days after, give the following:—

Calomel, six grains;
Barbadoes aloes, half a dram.

Divide into six doses, and administer one every or perhaps every other morning, as you may judge the patient can bear it: when you may give tonics, as recommended under the head *Distemper*.

What is called the *megrim* or giddiness in the head, is a species of fit, and may be removed by bleeding. The same disease is, by some, denominated *falling madness* (a ridiculous name certainly,) from, I suppose, the animal occasionally falling from giddiness. When thus afflicted, the dog will frequently rub his feet against the sides of his mouth, and appear as if he had a bone in his throat. Any of these symptoms will give way to the treatment just described: and where the disorder is not very violent, it may generally be removed by bleeding, which, as it has formed a principal feature for the last few pages, it may not be amiss to say a word or two on the best mode of performing the operation, under a distinct head.

MISCELLANEOUS.

PROPOSALS OF THE FRANKLIN INSTITUTE, OF PHILADELPHIA,

FOR THE EXHIBITION OF OCTOBER, 1826.

Addressed to the Manufacturers of the United States.

The Managers of the Franklin Institute of the State of Pennsylvania, for the promotion of the Mechanic Arts, having determined on Wednesday, October 3, 1826, for holding the third annual exhibition, they respectfully inform their fellow citizens of this arrangement; and invite, not only the manufacturers and artists of Pennsylvania, but those of all the Union, to send to this Exhibition, the products of their industry, skill, and ingenuity.

Amongst the various objects of the Institution, that of making producers and purchasers acquainted with each other, and developing the capacities

of the country to supply its wants, and sustain its commerce, is one in which the Managers take a deep interest; and to promote this important object, these exhibitions are established. Both parties are invited to give them their warmest support; producers by sending specimens of their goods, &c. and buyers by attending, and thereby becoming acquainted with what they can procure at home, on as good or better terms than elsewhere.

At the previous exhibitions, every effort has been made to discharge the duties incumbent on the Managers, in such a manner as should serve all parties; and they feel gratified that their exertions have given so much satisfaction to the public. On the present occasion, an assurance is given that the same zeal and attention will characterize the ensuing October exhibition.

It being impossible for the Managers to make a proper arrangement of the articles, if not received previously to opening the exhibition, it will be indispensable that goods should be at the place of deposit, on, or before the 29th day of September; and as one of the objects of this exhibition is to give activity to industry, the Managers leave it to every depositor, to take such means of publishing his prices and terms, as in his judgment shall appear best; but it is required, that the owner's name and place of residence, shall be attached to the articles.

The following premiums are offered to promote the industry, skill, ingenuity, and enterprise of the country; to be awarded at the ensuing exhibition, to the makers of articles, in the opinion of the judges, deserving of the proposed rewards.

The premiums will be awarded by committees appointed by the Board of Managers, to decide on the merit of each branch of manufacture, or kind of goods; and their decision will be adhered to; the Managers of the Institute reserving to themselves the right of withholding any premium where the properties of the exhibited articles are not respectable.

Although the Institute is not in circumstances to offer premiums for so many interesting articles as might be desired, it will exercise the right of awarding compliments and rewards for such as are not specified in the list of premiums, where there exist distinguishing marks of superior usefulness, perfection in workmanship, beauty, or ingenuity.

To insure partiality and inspire confidence, it has been determined that no committee shall award a premium to any of its members; and no Manager shall receive any premium or compliment.

It will be observed, that several premiums offered the last year, for important objects, have now been omitted; but the Institute will renew the offer of them, whenever there appears to be a reasonable ground for expectation that they will be claimed.

Proof of origin will be required in all cases competing for premium. No premium will be given on account of any article that has obtained one at any other place, or from this Institute on a former occasion; or, that is of a quality inferior to what has already been before the Franklin Institute.—Where the price forms one of the conditions of the premium, the makers must comply with the requisition, before they are entitled to the compliment.

Articles may be deposited at the Hall of the Franklin Institute, any time after the first of next August. Persons desiring further information, are invited to address themselves to any member of the committee on premiums, by letter, post paid, to which due attention will be given.

LIST OF PREMIUMS

Offered by the Franklin Institute of the State of Pennsylvania, and to be awarded at their third annual Exhibition, in 1826.

1. To the maker of the best Cast Steel, manufactured in any state of the Union. A specimen of at least ten pounds, in bars of one half inch square, or

smaller, must be exhibited; with a certificate, that at least one hundred pounds have been made. The quality of the steel, and the neatness of the bars, will be taken into consideration in estimating its merit. A silver medal.

2. To the maker of the best specimen of Cast Iron Pipes, manufactured in the United States; samples not to be less than one hundred feet, of one inch calibre, in sections of at least four feet long; soft iron, and clean. A silver medal.

3. To the maker of the best smith's Anvil, steel faced, weighing not less than seventy pounds. The anvil made in any state of the Union. A silver medal.

4. To the maker of the best specimen of soft iron castings fit for small machinery, to be cast free from sand and smooth; 50 lbs. to be exhibited. A silver medal.

5. To the person who shall have made in Pennsylvania, the best Rollers, suitable for the purposes of silversmiths. A silver medal.

6. To the maker of the best Mill or Press Screw, of wrought iron, for the purposes of clothiers, printers, book-binders, &c., not less than 24 inches in diameter, and of the usual length. It must perform its revolutions in the box without variation at the lower end, or pressing point. The box to be also of wrought iron. A silver medal.

7. To the maker of the best and most perfect Scale Beam, for common purposes, superior to any now in use, capable of weighing at least twenty pounds; the beam made in the United States. A silver medal.

8. To the maker of the best Instruments for operations on the Eye; the instruments to be made in Pennsylvania. A silver medal.

9. To the maker of the best Table Knives and Forks, at least one dozen pair to be exhibited. A silver medal.

10. To the maker of the best specimen of Sheet Brass; not less than twenty sheets must be exhibited. A silver medal.

11. To the maker of the best Brazier's copper, not less than twenty sheets to be exhibited, (30 by 60 inches.) A silver medal.

12. To the maker of the best raised Copper Bottoms, suitable for stills or boilers, not less than thirty inches in diameter. A silver medal.

13. To the inventor of the best constructed grate, or stove, for burning anthracite. A silver medal. The object of this premium is, chiefly, to obtain a grate suitable for domestic purposes, which will unite convenience with economy, and which may be used for cooking. Tastefulness of design, though not a primary object, will be considered, as far as it is compatible with economy. Certificates will be required of the grate having been in use for some time, of the quantity of coal which it consumes, and of the effect which it produces.

14. To the inventor of the best constructed furnace for consuming anthracite in generating steam, to be applied to steam engines. A silver medal. Certificates will be required of the furnace having been some time in use, of the quantity of coal consumed, and of the effect produced.

15. To the person who shall have manufactured in Pennsylvania, the greatest quantity of Iron from the ore, using no other fuel but anthracite, during the year ending September 1, 1826. The quantity not to be less than twenty tons. A gold medal.

16. To the maker of the greatest quantity of Glassware, not less than 100 lbs. The fuel used in the manufacture to be not less than 3 anthracite coal. A gold medal.

17. To the maker of the best Flint Glassware; a variety of articles must be exhibited, and the excellence of their form, as well as the quality of the material, will be considered in awarding this premium. A silver medal.

18. To the maker of the best Crucibles of earth-

enware, or other cheap material, suitable for brass foundry. The crucibles must be able to resist heat, as well as those made of black lead; and to stand at least seven heats in a brass foundry's furnace. They must be capable of holding at least forty pounds of metal; one dozen of crucibles must be exhibited, together with a certificate of their having been made in the United States. A silver medal.

19, 20, 21. To the makers of the best pottery of Red and White Earthenware and China, from American materials.—For each a bronzed medal.

22. For the best Glaze, made without lead, sufficiently cheap to be applied to common pottery.—A silver medal.

23. To the manufacturer of the best piece of Black Broad Cloth, made in the United States; not less than ten yards to be exhibited. A silver medal. Regard will be had to the quality of the dye, as well as of the cloth.

24. To the manufacturer of the best Flannel, made in Pennsylvania, not less than forty yards to be exhibited. A silver medal. Assurance must be given, that three hundred yards at the stipulated price, will be furnished, if required.

25. To the manufacturer of the best Green Baize, made in the United States; not less than fifty yards to be exhibited. A bronzed medal.

26. To the maker of the best Woollen Blankets, made in the United States; one dozen pair to be exhibited. A silver medal. The blankets to be from two to four points; regard will be had to the weight, and no premium awarded unless the quality be equal to the imported article.

27. To the maker of the best specimen of Ingrain Carpeting. A silver medal. A piece of not less than twenty yards to be exhibited, with a certificate of its having been made in the United States.

28. To the maker, in Pennsylvania, of the best Worsted Stockings, not less than one dozen pair to be exhibited. The price will be considered. A silver medal. Five dozen pair to be furnished at the same price, if required.

29. To the manufacturer, in Pennsylvania, of the best Loom Cotton Stockings; not less than one dozen pair to be exhibited. A silver medal.

30. To the manufacturer of the best specimen of Furniture Calicoes, (Chintzes) made in the United States; not less than fifty yards to be exhibited. A silver medal.

31. To the manufacturer of the best specimens of Calicoes, or Prints, for ladies' dresses, made in the United States; not less than fifty yards to be exhibited. A silver medal.

32. To the manufacturer of the best specimen of Salempore, manufactured in the United States, in imitation of that imported; not less than ten pieces to be exhibited. A silver medal. In estimating this article, its colour, as well as texture, will be considered.

33. To the manufacturer of the best Cotton Tick- ing, made in the United States. A silver medal.

34. To the manufacturer of the best Cotton Cloths, of superfine quality, in imitation of English Cambric Muslin. A silver medal.

35. To the person who shall have produced in Pennsylvania, and reeled, during the year ending October 1, 1826, the greatest quantity of Raw Silk, not less than ten pounds. A silver medal.

36. To the maker of the best specimen of Morocco, made in the U. States, not less than twelve pieces of each colour, to be exhibited. A bronzed medal.

37. For the best specimen of Skirting Leather, tanned and dressed in Pennsylvania, twenty sides to be exhibited. A silver medal.

38. For the best specimen of Hog Skins, dressed in Pennsylvania, two dozen skins to be exhibited. A silver medal.

39. For the best set of Gig, or Coach Harness, made in Pennsylvania. A silver medal.

40. To the maker of the best Buckskin Gloves, the leather dressed in the United States, the gloves made in Pennsylvania; not less than a dozen pair to be exhibited. A bronzed medal.

41. To the maker of the best Kid, or Sheep Skin Gloves, the leather dressed in the United States, the gloves made in Pennsylvania; not less than a dozen pair to be exhibited. A bronzed medal.

42. To the manufacturer of the best Japanned Leather, prepared in the United States. A bronzed medal.

43. To the maker of the best Cabinet Secretary and Book Case. A silver medal.

44. To the maker of the best Pier Table. A silver medal.

45. To the maker of the best Mahogany Chairs and Sofa. A silver medal. One dozen Chairs to be exhibited. Regard will be had, in awarding the premium on cabinet ware, to the taste exhibited in the design, as well as to excellence in workmanship.

46. For the best Beaver Hat, price \$9. A silver medal.

47. For the best Fur Hat, price \$4. A silver medal. Assurance must be given by every competitor, that he will furnish 500 hats, equal in quality, and at the price named, if required.

48. To the maker of a Hydrant, that shall be adjudged superior in principle, to any now in use. A silver medal.

49. To the person in the United States, who shall have invented an apparatus practically superior to any now in use, for heaving up a Ship's Anchor. A silver medal.

50. To the person who shall indicate to the Institute, a method better than any in use, to protect timber in ships, or other works, against the effects of the dry rot. The process must be such as can be applied on a large scale, without too great an expense. A silver medal.

51. To the individual, or company, in Pennsylvania, who shall construct a Marine Rail way, for hauling ships out of the water for repair, or other purposes, the same to be completed within one year. A silver medal.

52. To the person who shall have made in Pennsylvania, the greatest quantity of Oil, from any vegetable raised in this state. A silver medal. The oil must be of a quality suitable to be used as a substitute for Florence or Olive Oil—the quantity obtained, not to be less than twenty gallons.

53. To the person who shall cultivate the greatest quantity of Madder—the produce of not less than a quarter of an acre. Samples must be exhibited, with a certificate of the quantity produced. A silver medal.

54. To the person in Pennsylvania, who, from the 1st of January, to the 1st of September, 1826, shall have plaited the greatest length of Straw or Grass Plat, suitable for bonnets. A silver medal.

55. To the family in Pennsylvania, which has plaited the greatest length of Straw or Grass Plat, suitable for bonnets, from the 1st of January, to the 1st of September, 1826. A silver medal.

56. To the person in Pennsylvania, who has made the greatest number of Straw, or Grass Bonnets; from the 1st of January, to the 1st of September, 1826. A silver medal.

57. To the family in Pennsylvania, which has made the greatest number of Straw, or Grass Bonnets, from the 1st of January, to the 1st of September, 1826. A silver medal.

58. To the manufacturer of the best White Lead; 50 lbs. to be exhibited. A silver medal. Assurance must be given that twenty tons will be furnished of the same quality, at the same price.

59. For the best specimen of Lithography, to be executed in the United States. A silver medal.

60. To the person who shall discover, and indicate, any substitute for Printer's Ink, which shall be superior to the present composition. A silver medal.

61. To the maker of the best pair of Marble Mantles, of Pennsylvania Marble; the design, as well as execution of the work, will be considered. A silver medal.

62. To the Pupil of the Drawing School of the Institute, who shall make and exhibit, in October, 1826, the best specimen of Drawing. A silver medal. All the specimens included for competition must be prepared in the school, and under such regulations as may be enjoined by the Professor of Drawing. They will be submitted to a committee of Judges, who shall decide which specimens are worthy of being exhibited to the public, and from among these the best shall receive the premium. The Professor of Drawing shall be ex-officio a member of the committee of examination.

63. To the person who shall discover and make known to the Institute, previous to the 15th of August, 1826, a bed of infusible Clay, suited for the manufacture of Fire Bricks or Crucibles. A silver medal. The bed of clay must be situated in Pennsylvania. It must be of sufficient extent to admit of its being used in the arts. A barrel of it must be delivered to the Curators of the Institute, (free of charge) on or before the 15th of August, in order that it may be tried. The object of this premium is to obtain a clay analogous to that of Stourbridge, in England; it being considered that the substances now used in the manufacture of fire bricks in this city, are not properly infusible clays, but mixtures of common clay with the micaceous sands, resulting from the disintegration of the granitic rocks in this vicinity; and that they afford but a very indifferent substitute for the fire clays so extensively used in England, Germany, &c.

ON MANUFACTURING OF INDIGO.

(From the New York Statesman.)

In making of indigo, the principal difficulty consists in obtaining a due degree of fermentation. If this be carried a little too far the product will be small and of inferior quality; if to an extreme, the whole will be lost. If not carried far enough, the expense will exceed the value of the product, and the article will be weak. The same results take place in woad dyeing. The proper time of gathering the plant, and impregnating the secule with oxygen after the tincture matter has been extracted by fermentation, are processes more easily defined, and more readily acquired by practice; consequently the young practitioner should first devote all his attention to the ascertaining the due degree of fermentation, and when this is acquired, he will soon be able to make indigo as profitably in this as is done in any other country. This knowledge could best be acquired by making experiments on a small scale, in small vessels. The steeper could easily be made of a pipe or hogshead cut in two, and the other half would answer for the battery, or that vessel into which the fermented liquor is drawn from the plant, for the purpose of agitating it, and causing the atmospheric oxygen to combine with the colouring secule.

I shall proceed to give the opinions of different manufacturers on the making of indigo.

"After the indigo has been steeped, (or scalded,) draw off a little of the water, and with a pen dip into it, make a few strokes on white paper. The first will probably be high coloured; in which case the indigo is not sufficiently fermented. This operation is to be repeated every quarter of an hour, until it loses its colour, when it will have arrived at the true point of fermentation."

MR. L.'S OPINION.

"Let a small hole be made in the steeper six or eight inches from the bottom, exclusive of the opening or aperture, for drawing off the impregnated water. Let this hole be stopped with a plug, yet not so firmly but that a small stream may be per-

mitted to ooze through it. After the plants have been steeped some hours, the fluid oozing out will appear beautifully green, and at the lower edge of the cistern, from whence it drops into the battery, it will turn of a copperish colour. This copperish hue, as the fermentation continues, will gradually ascend upwards to the plug, and when that circumstance is perceived, it is proper to stop the fermentation.

"During the progress of this part of the business, particular attention should be paid to the smell of the liquor which weeps from the aperture; for should it discover any sourness, it will be necessary to let the fermenting liquor run immediately into the battery, and lime water of sufficient strength must be added, until it has lost its sourness. As it is running off it will appear green, mixed with a bright yellow or straw colour, but in the battery it will be of a beautiful green.

"The tincture being thus discharged into the battery, it is there churned or agitated until the dye begins to granulate, or float in little flakes on the water. When the fluid has been well churned for the space of fifteen or twenty minutes, and being in a cup or plate, appears curdled or coagulated, a strong impregnation of lime water is gradually added, not only to promote a separation, but likewise to fix the colour, and preserve it from putrefaction.

"But the operator must carefully distinguish the different stages of this part of the operation, and attentively examine the appearance and colour as the work advances; for the grain passes gradually from a greenish hue to a fine purple, which is the proper colour, when the liquor is sufficiently worked. Too small a degree of agitation leaves the indigo green and coarse, while too vigorous an action brings it to be almost black.

"The liquor being properly and sufficiently worked, and the pulp granulated, it is left undisturbed until the coloured seculae settle at the bottom, when the incumbent water is drawn off, and the indigo distributed into small linen bags to drain; after which it is carefully put into little square boxes or moulds, and suffered to dry gradually in the shade."

There is, throughout the operations of indigo making and woad dying, a striking similarity. When the woad vat has arrived to a perfect stage of fermentation, the colour is a bright bronze green with yellow streaks, and I have no doubt that were sufficient caustic lime added by the indigo maker, when the liquor is drawn from the steep, to regulate the fermentation and prevent its going to excess, that excellent colours might be made in the battery on cotton; and if warmed to a proper degree, on woolen and silk. When the fermentation of the woad vat is carried to a great excess, the indigo loses all its oxygen, becomes white, and never can be made, by any process yet discovered, to re-absorb oxygen. This excess is seldom permitted to take place by a skilful workman; yet it sometimes occurs that the best of woadmen will permit a liquor to go beyond the proper bounds, and though he can stop its progress with caustic lime, and bring on a new fermentation, so as to continue working the vat, yet he always loses a portion of the indigo, and the quantity lost will be in proportion to the excess of the fermentation. A similar loss must be sustained by the indigo maker, when he permits the fermentation of his steepening liquor to go too far; it is, therefore, of the utmost importance, that he should make himself perfectly acquainted with this part of the operation.

I shall continue the subject, in one or more essays, at as early a period as possible. HOPSON.

NATURAL HISTORY

OF THE EGGS, LARVÆ, AND PUPÆ OF ANTS.

(Concluded from page 135.)

The insect in the state of pupa, has acquired the figure it will always preserve; nothing seems want-

ing but strength and a little more consistence: it is also as large as it will ever be; all its members are distinct, one single pellicle envelopes them. The ant, under this form, continues to move for some moments after its quitting the state of a larva, but it soon becomes immovable: it afterwards changes gradually in colour, passing from a fine white to a pale yellow; then becoming red, and in several species, brown, almost verging to black. The rudiments of wings may at this time be seen in those which are destined to fly. The pupæ have still many attentions to receive from the workers; the greater part are enclosed in a tissue spun by themselves before their metamorphosis; but they cannot, like other insects, liberate themselves from this covering by effecting an opening in it with their teeth. They have scarcely the power of moving; their covering is of too compact a texture, and formed of too strong a silk, to allow of their tearing it without the assistance of the workers. But how do these indefatigable attendants ascertain the proper moment for this process?—If they possessed the faculty of hearing we might imagine they knew the fit time, from some noise produced in the interior of the prison, by the insects whose development has commenced; but there is no indication favouring this opinion; it is probable they have a knowledge of it from some slight movements that take place within, which they ascertain through the medium of their antennæ; for these organs are endowed with a sensibility, of which it would be difficult to form a just idea: whatever it be, they are never deceived.

Let us still follow them in that labour, wherein are displayed, as it regards their charge, a zeal and an attachment which would justly merit our attention, even were they the real parents of these insects; how much greater then must be our astonishment, when we consider that they bear no further relation to them, than that of being born under the same roof. Several males and females lay in their enveloping membrane in one of the largest cavities of my glazed ant-hill. The labourers, assembled together, appeared to be in continual motion around them. I noticed three or four mounted upon one of these cocoons, endeavouring to open it with their teeth at that extremity answering to the head of the pupa; they began thinning it, by tearing away some threads of silk where they wished to pierce it; and at length by dint of pinching and biting this tissue, so extremely difficult to break, they formed in it a vast number of apertures. They afterwards attempted to enlarge these openings, by tearing or drawing away the silk; but these efforts proving ineffectual, they passed one of their teeth into the cocoon, through the apertures they had formed, and by cutting each thread, one after the other, with great patience, at length effected a passage, of a line in diameter, in the superior part of the web. They now uncovered the head and feet of the insect to which they were desirous of giving liberty, but before they could release it, it was absolutely necessary to enlarge the opening; for this purpose, these guardians cut out a portion in the longitudinal direction of the cocoon, with their teeth alone, employing these instruments as we are in the habit of employing a pair of scissors. A considerable degree of agitation prevailed in this part of the ant-hill; a number of ants were occupied in disengaging the winged individual of its envelope; they took repose and relieved each other by turns, evincing great eagerness in seconding their companions in this undertaking.* To effect its speedy liberation,

* Among those ants I kept in confinement, I observed that considerable bustle prevailed when any of the pupæ were about to quit the cocoon. For the most part, two or three stationed themselves on or near each cocoon. From seeing more than once, two engaged in the operation of extricating the imprisoned ant from its envelope, I was desirous of ascertaining whether a

some raised up the portion or *bundalette* cut out in the length of the cocoon; whilst others drew it gently from its imprisonment. When the ant was extricated from its enveloping membrane, it was not, like other insects, capable of enjoying its freedom, and taking flight: nature did not will it that it should so soon be independent of the labourers. It could neither fly, nor walk, nor without difficulty stand; for the body was still confined by another membrane, from which it could not, by its own exertions, disengage itself.

In this fresh embarrassment, the labourers did not forsake it; they removed the satin-like pellicle which embraced every part of the body, drew the antennæ gently from their investment, then disengaged the feet and the wings, and lastly, the body, the abdomen, and its peduncle. The insect was now in a condition to walk and receive nourishment, for which it appeared there was urgent need. The first attention therefore, paid it by the guardians, was that of giving it the food I had placed within their reach.

The ants in every part of the ant-hill were occupied in giving liberty to the males, females, and young labourers, that were still enveloped. On being dispossessed of their coverings, the remnants were collected and placed aside in one of the most distant lodges of their habitation; for these insects observe the greatest order and regularity. Some species of ants remove these shreds to a distance from the ant-hill, others, cover the exterior surface of their nest with them, or collect them in particular apartments.*

single worker could accomplish this operation. I therefore placed in a wine glass with a little moistened earth one of the yellow ants with three or four pupæ; the first object with this little creature, was that of excavating a chamber for the deposition of its treasure. The pupæ were then brought up, and laid on the surface of the earth, from day to day, to receive the sun's warmth. In a few days, I saw the scattered remnants of one of the cocoons, and the worker with his assistant engaged in giving liberty to the remaining ants. I did not, at the time, notice whether the pupæ were or were not capable of effecting their own liberation; but according to the statement of De Geer, the pupa dies when neglected by the workers.—T.

* M. Latreille has remarked, as well as De Geer, that, among the ash-coloured ants, there are some pupæ which are naked. Others enclosed in a cocoon; but he does not know if there are any that undergo their metamorphosis without spinning, or if the workers tear off their enveloping membrane; however he leans to this latter opinion. I have often made the same remark. I have even confirmed the conjecture he had advanced, and often seen the ash-coloured labourers opening the cocoon of the pupæ, a short period after their transformation. The mining ants act the same: but for what purpose do they hasten to liberate them, and of what advantage is it to the larvæ to spin, if the workers so soon destroy the tissue they have woven? It cannot be for the sake of unfolding their members from the last envelope in the state of pupæ, for the ants do not render them this service until they are capable of motion, and have acquired their full strength: they even know the precise moment when to remove them. Are not these cocoons of essential service to the larvæ at the time of passing to the state of pupæ? I have frequently drawn from their cocoons, larvæ which had just spun, and which were not yet metamorphosed: some days after, they began rejecting their larva-skin, but could not disengage their limbs, which, with the abdomen, remained attached to it. The ants offered them no assistance. These pupæ were never well developed, and they soon perished. It appears that these cocoons offered them a point of support, enabling them to free themselves from the skin which they are under the necessity of rejecting. It will be objected, perhaps, that the larvæ of several species never spin, and they would of course experience the same inconvenience as those I drew too hastily from the cocoon. To this I answer, that nature has provided for this case in another manner:—the body of these ants is very different from that of others, their elongat-

The labourers we have seen in charge of the larvæ and pupæ, evince the same solicitude for the ants, freshly transformed: they lie for some days under the necessity of watching and following them; they accompany them in their excursions, point out to them the paths and labyrinths of their habitation, and nourish them with the greatest care; they also perform the difficult task of extending the wings of the males and females, which would otherwise remain folded up, and acquit themselves with such address, as not to injure these frail and delicate members.

At one time, they bring together, in the same apartments, the males they find rambling; at another time, act as guides in conducting them from the ant-hill. In short, the labourers appear to have the complete direction of their conduct, as long as they remain there, and neglect not to discharge the several duties connected with these insects (whose strength is not yet developed,) until the period of their taking flight for the purpose of continuing their kind.

How can we sufficiently admire the assiduity which the labouring ants evince for the little ones whose safety is confided to them!—By what bond has nature attached them so strongly to the progeny of another mother! This question having a reference to the different families composed of three sorts of individuals,—the labourers, charged with the educating the young, fabricating, and provisioning the nest; and those upon whom the office devolves of multiplying the species,—deserves to be treated at greater length, and with greater attention than our confined knowledge permits. But we have a glimpse, however, of the secret of this singular constitution, in the resemblance the labourers have with the female ants, relatively to their external sexual organs. The connexion which exists between ants, and hive and humble bees, throws additional light upon this subject, by shewing us labourers demi-secund with the one,* and little rival females, abundant enough with the other.† That solicitude also which the labouring ants evince for the larvæ, whose birth they have witnessed, clearly discovers their sex, and would be sufficient to prove that they are neither neuters nor males, even if the conduct of the males towards them, did not indicate that they belong to the class of females. This observation, which I have several times made, (the details of which I suppress,) leaves me in no doubt upon this point. I shall here only add, that I have never known the labouring ants produce eggs, and have constantly found the approach of the male attended with the sacrifice of their lives.

But with what view does nature permit as many sterile females among ants as among wasps and bees? Is it not in order to increase the number of individuals in the same family, without producing a population that would be more than proportioned to it? In reserving a certain number of females for conception, she has appointed others to take care of the infant generation. She has even deprived the latter of the faculty of flying; but in return for this, they enjoy a sweet recompense, either (as we have no reason to doubt) by their being inspired for their charge with the sentiments of mothers for their young, or by their having an unlimited power over the other orders of the society in which they live; a truth which I hope to establish in the course

ed peduncle gives greater liberty to the abdomen, to move, bend, and extend itself, than the peduncle of the first, which is closely attached to the corselet. They have, in addition, a sting which may also facilitate their development, for the pupæ at first possess much strength and vivacity, although they soon after pass into a state of lethargy.—A.

* Nouvelles observations sur les Abeilles, per F. Huber.

† V. Linn. Trans. vol. vi. Memoir upon Humble Bees, by the author of these researches.

of this work, and which differs widely from the received opinion, that these republics are governed by several chiefs.

RECIPES.

REMEDY AGAINST THE EFFECTS OF INK, WHEN JUST SPILLED.

If the ink be spilled on a ruffle, or apron, &c. while you have it on, let one hold the spotted part between his two hands over a basin and rub it, while another pours water gradually from a decanter upon it, and let a whole pitcher-full be used if necessary; or if the ruffle, apron, &c. be at liberty, let it be dipped into a basin filled with water, and there squeezed and dipped in again, taking care to change the water in abundance every two or three squeezes. If the ink be spilled on a green table carpet, it may immediately be taken out with a teaspoon so entirely, that scarcely any water at all shall be wanted afterwards, provided it was only that instant spilled, as the down of the cloth prevents the immediate soaking in of the ink, or of any other liquor (except oil); but if it have lain sometime, be the time ever so long, provided the place be still wet, by pouring on it fresh clean water by little and little at a time, and gathering it up again each time with a spoon pressing hard to squeeze it out of the cloth into the spoon, you will at last bring it to its natural colour, as if no such accident had happened.

REMEDIES AGAINST FLEAS.

Fumigation with brimstone; or the fresh leaves of penny-royal sewed in a bag, and laid in the bed, will have the desired effect.

TO PREVENT WOUNDS FROM MORTIFYING.

Sprinkle sugar on them. The Turks wash fresh wounds with wine, and sprinkle sugar on them. Obstinate ulcers may be cured with sugar dissolved in a strong decoction of walnut leaves.

THE FARMER.

BALTIMORE, FRIDAY, JULY 21, 1826.

TO CORRESPONDENTS.—Columella has been received—and though we have never had a correspondent for whose motives and abilities we have higher respect, it would be more agreeable to us, and, as we are persuaded, to him, to avoid further discussion in that particular case. We ask his acquiescence as a favour to ourselves, under assurances of great personal regard.

To Cecrops, whom we have not the pleasure to know, we must say, that we much regret that he should take offence at the course we have adopted. Foreseeing what would ensue, we would have avoided the publication of his first piece, but he insisted. The writer attacked had the privilege of replying, and there the dispute was arrested. If there be any offensive allusion in what has been designated by Cecrops, it is more than the Editor, or the public, has or can see.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	7 50	8		
BACON, and Hams, . .	lb.	5	9	9	12
BEES-WAX, Am. yellow	—	31	33		50
COFFEE, Java,	—	17	17½	22	25
Havana,	—	15	16½		20
COTTON, Louisiana, &c.	—	13	14		
Georgia Upland, . . .	—	11	12½		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	14	16	18
Dipt,	—	11			14
CHEESE,	—	10	12	12	15
FEATHERS, Live, . . .	—	30		37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed,	—	7 00			
FLAXSEED, Rough, . .	bush	1 12½			
FLOUR, Superfine, city,	bbl.	4 37½		5 00	
Fine,	—	4 00			
Susquehanna, superfi.	—	4 25			
FLAX,	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	75	76		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler, & Red, new	—	87	88		
do. Red, Susque. . .	—	90	95		
Rye,	—	65	70		
Barley,	—	80			
Clover Seed, Red . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed,	—	2 25		3 00	
Oats,	—	50	53		
Beans, White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	15		25	
HOGS' LARD,	—	7	9	12	
LEAD, Pig	lb.	6½			
Bar	—	8	8½		
LEATHER, Soal, best,	—	22	23	62	
MOLASSES, sugar-house	gal.	46		62½	75
Havana, 1st qual. . .	—	32	34	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27		40	
Spermaceti, winter .	—	70		88	
PORK, Baltimore Mess,	bbl	11 00	12 00		
do. Prime,	—	8 00	9 00		
PLASTER, cargo price,	ton.	3 87½	4 00		
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	7½	8	12
WHISKEY, 1st proof, .	gal.	29	31	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	38		50	
SUGARS, Havana White,	c. lb.	12 50	13	15	16
do. Brown,	—	8 50	9 50		
Louisiana,	—	7 50	9 50	10	11
Loaf,	lb.	19	22	20	25
SPICES, Cloves, . . .	—	70	75	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	16	17	25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	45		75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 15	1 20	2 00	
Lisbon,	—	1 15	1 20	1 50	1 75
Claret,	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full b'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	15	20		
Skinner's or Pulled, .	—	20	25		

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AGRICULTURE.

M'CORMICK'S PLOUGH.

[The maker of these excellent implements presented one to General Lafayette, who submitted it to the Royal Central Agricultural Society of France for examination and report.

The result of their inspection of its form and principles was sent by the General through the Editor of the American Farmer, accompanied by a polite and friendly acknowledgment, to Mr. M'Cormick; both of which follow, and will be read with interest and attention, as well for the intrinsic importance of the subject, the plough being the main implement in all agricultural improvements; as also with the peculiar regard which is attached to every thing from the pen of one of the most devoted patriots and the most benevolent of men.]

DEAR SIR,

La Grange, May 28, 1826.

The very ingenious plough, of which you have been pleased to make to me a most acceptable present, has been, on its arrival in France, submitted to the examination of the Central Agricultural Society in Paris. Inclosed you will find the report made by a committee appointed for that purpose, and the conclusions which, as you will see by the original letter of Mr. Hugord, the society have adopted. Although I wish to preserve your much esteemed gift, the plough will be at their service for every comparative experiment; and if I did find an opportunity of a call upon you for a number of them, I would not neglect it. Accept, my dear sir, the cordial thanks, good wishes, and regard, with which I am, most sincerely,

Yours, LAFAYETTE.

[Translation.]

GENERAL,

Mr. Hachette and I have rendered to the Agricultural Society our report on M'Cormick's plough. It was accepted by the society. I send you a copy of it; hoping it may be agreeable both to you and to Mr. M'Cormick.

The society have authorized me to have made, at their expense, a plough of the same sort. It is completed, but not as perfectly as I had desired; and I must therefore beg you to allow me to keep the model some time longer.

I have the honour, General, to be, with the highest consideration, your very humble and most obedient servant,

HUGORD, JR.
Paris, May 23d, 1826.

REPORT

Made to the Royal Central Agricultural Society, at a meeting on the 17th of May, 1826, on a Plough invented by Mr. M'Cormick, a citizen of Virginia

The Society has desired Mr. Hachette and me to prepare a report, on the plough presented to them by General Lafayette in the name of Mr. M'Cormick, a citizen of the state of Virginia.

We shall submit to the Society, not an essay but an explanation. We shall consequently say nothing of the manner in which the plough works, but shall defer that until we have had an opportunity of comparing it, in that respect, with others.

The principles on which this plough is constructed, are those of Arbutnot, Jefferson, and Small; and it will be sufficient to remark, that they are the best yet devised.

It is light, (weighing only 404 kilogrammes,) and is nevertheless so solidly built as to induce us to believe that it will answer in the stiffest soils. Its lightness leads us at the same time to think, that in light and cultivated ground, it might be easily drawn by a single horse of common strength, and would serve to go between the rows in drill crops, which is now often done with the Scotch iron-plough.

No. 19.—Vol. 8.

It appears to possess, in the highest degree, one advantage of simple ploughs; that is, to serve indifferently for light or stiff soils, and require (as Messrs. Thaer and Dombasle have again demonstrated,) less power than the wheel ploughs.

Nevertheless, we will not assert that it will be equally applicable to every sort of culture.

Besides this first advantage, it possesses another not less important, in the simplicity of its construction. It is held together by seven nut-screws, each of the same strength; so that, with a simple iron or even wooden peg, you may take it completely to pieces and put it together again, when you wish to change or alter any part. With the exception of the mould-board, which is of cast iron, any intelligent blacksmith or cartwright can replace a piece that may have been accidentally broken; and there would be no danger of his disturbing the relative situation of the various members, for if he should attempt to add a piece not perfectly similar to the injured one, it would not fit without introducing confusion among the whole.

Thus, although this plough can be made, on account of the strict proportion among its parts, only by a skilful mechanic, it can be repaired, at least, by a simple workman; which is a great advantage. A gentleman of landed estates has requested one of them, which he intends to send to Berri, where the plough without wheels is used as well as the wheel plough.

Mr. M'Cormick's plough differs, in several respects, from Small's. The coulter is straight, sharp on both edges, so that it may be turned, and has its edge at the middle of its thickness. This coulter, therefore, cannot serve the purpose, which Thaer attributes to those that are perfectly flat on the left side, that of steadying the plough by allowing it to present a plane surface to the old sod; nor can it boast the particular advantage of turning aside the stones that the plough meets in its progress.

The left side of the body of the plough, that is, the space situated behind and to the left of the share, and from the *sep* to the left handle, is vacant. The point of the share is not slightly curved and has no *entrure*, as they call it, but is perfectly flat on its lower surface, and slopes off rapidly from its thickness. The inventor probably supposed, that that inclination of the surfaces would be sufficient to resist the propensity in the point of the share to curve upwards, and believed it to depend in great measure on the ploughman. He has also added a regulator, to raise or lower, as it is intended to plough shallow or deep.

A trial of the plough can alone enable us to appreciate the effect of these modifications.

There is, properly speaking, no *sep* at all. An iron bar, 3 centimetres thick and 5 long, connects the lower left side of the share with the left handle; and there can be scarcely any friction on that side. This part, though diminutive, affords, nevertheless, the body of the plough a sufficient point of *appui* (support), against the old sod, to secure effectually the progress of the implement, by preventing it from turning to the left.

The plough in question has a strong general resemblance to the Scotch plough of iron, called the Swing Plough, (*brandilloire*.) The principal differences are, that the *aye* (meaning, probably, the beam,) and the handles are of wood instead of iron, that it is lighter; that the mould-board comes nearer upon the share, at the same time that it is not so long and less curved, and is connected with the share in a different manner; and finally, that it can be more readily taken to pieces and repaired.

The plough which I have had made in imitation of it, was made by a blacksmith who had never before turned his hand to such work. His bill will convince us, that in an economical point of view, Mr. M'Cormick's plough is as good as any others without wheels.

(Here the bill of particulars is inserted in the report. The nett amount was 75 francs—equal to about \$15.)

If the share had not been wholly tempered, it would have cost less; and if the workman had been more accustomed to the business, he would have charged less: so that the plough ought not to have cost more than about \$13.

From these details, which we have recited, we have come to the conclusion, that Mr. M'Cormick's plough is simple and constructed on the best principles; and we respectfully recommend that one like it be made, at the expense of the Society, to enable us to return the model to Gen. Lafayette, who wishes to keep it, at the same time that we preserve a copy, for the comparisons which the committee are directed to institute between it and others.

WHEAT.

MR. SKINNER,

Talbot county, July 17, 1826.

Further in relation to wheat:—Most of the different kinds of wheat, such as the Lawler, the keggy, and the New York white flint, have been supposed and reported to resist the ravages of the Hessian fly, by some peculiar inherent quality.—This notion is, I believe, now satisfactorily exploded, as experience has taught us that there is no wheat that resists the Hessian fly. Under circumstances favourable to the fly, it will destroy every branch of wheat in which it is deposited. Some kinds of wheat have a greater recuperative power than others; and of these the Lawler is most remarkable. After the fly has appeared to have destroyed every shoot above ground, if the season will aid it at all, it will put forth fresh shoots which will bear grain; but the Lawler is the latest of all wheat, and takes longest to mature. Of course, as we have all found, it is most subject to rust and disaster. Lawler wheat should never be fed down. The same remarks apply to the keggy wheat, and in a great degree to the New York white flint, except that this last does not possess the recuperative power of the Lawler, and is not quite so late a wheat. It branches at first as finely as any wheat. The opinion that any wheat has the faculty to resist the fly either by the solidity of its stalk, the roughness of its blade, or the incompressibility of the stalk, or any other quality peculiar to itself, is a fallacy dangerous to be entertained, because not founded in fact. There is a difference in the stalk of different kinds of wheat, but it is unimportant as to the fly.

The early or "rare ripe wheat," is not supposed to have any quality of this kind. It has a soft straw, delicate for food, shorter than other straw, and is as easily destroyed by the fly in autumn, if seeded early, as any wheat that is known. Neither has it any of the recuperative power of the Lawler, nor does it branch equal to the New York white flint. Its power to elude the fly consists in its early maturity alone, which causes it to do well after late seeding, so as to be certainly exempt from autumn fly, and to be so forward in spring as to be jointed before the fly ordinarily commences its injurious attacks, and therefore it is out of danger. It owes its greater security against fly and disaster, altogether to its early maturity. The early wheat has a plump and white grain, and is uniformly the heaviest wheat that we have grown. It scarcely ever averages less than sixty pounds to the bushel, and has frequently been known to go to sixty-four and five; sixty-one and two pounds per bushel is its usual weight.

I do not remember what estimate the millers set on this wheat in comparison with other kinds; but this we all know, that millers are a little astute as well as capricious. It is an absurdity for farmers to be guided by millers as to the particular kind of

wheat they shall grow. Millers will always crack up that sort of wheat on which they think they can make the greatest gain, either by the fact of the smaller offal, or by the fiction which they may have in their power to create in relation to any thing else. But the farmer should understand his soil, his climate, the ordinary accidents to which different wheat is liable, and the character of the different kinds of wheat: then he will be enabled to form some judgment as to the wheat that will produce in his own lands the greatest number of pounds weight to the acre; and that is the mode to draw the greatest number of dollars to his pocket—which is, after all, the *"valde optatum."*

Nothing can be more ridiculous than to see farmers every where buying up nice white wheat for seed, without ascertaining whether their lands will grow it or not; supposing, I presume, that the produce must of course be as white as the seed. They spend their money in buying this seed at extravagant prices, and are mortified to find that the product is greatly inferior; in which case they sometimes accuse the seller of the seed wheat of not doing them justice, and desperately try somewhere else another expensive purchase, until they pay very dear for the knowledge, that their lands will not produce the fine white wheat, and that there are other kinds of wheat much better adapted to them, that they will produce more certainly and more abundantly.

There is another consideration too, sir, that may not be without its influence. We never see hung up in that excellent and highly useful gallery of agricultural portraits, the "American Farmer," the name of a farmer for his growing many pounds of wheat to the acre, until he gets up to some thirty or forty bushels; whilst those farmers who own the fine white wheat lands,

O fortunatos nimium! soliginis arva
colintēs

if they only grow from ten to fifteen bushels to the acre, are annually celebrated as the very nobility of agriculturists, (I use the term in no unkind sense,) and are mentioned by name as getting eight or ten cents a bushel more than the growers of red or brown wheat get for theirs. This is a stimulating excitement—and it ought to excite, not to error, but to exertion. A vast proportion of that land that will not grow the white wheat, will grow the heaviest crops of other wheat; and their proprietors ought to yield up the hope of the white coloured grain, (pardon the inaccuracy of the phrase,) for the more solid advantage of weight and quantity. Let these farmers be content to seek what is attainable; to improve their lands so as to produce such an average per acre as will entitle them to a place in the gallery of agricultural worthies. They cannot hope for fame in violation of the laws of nature. If lands are not natively of the peculiar texture of soil to grow the white wheat, no human art can supply the deficiency.

If it should be asked, if it is not equally strange that men on stiff soils and flat lands, should be inquiring for the seed of the bright tobacco to plant in those soils which every body knows will not produce the same sort?—I reply, I think not; and for his reason, founded upon this fact, that tobacco will retain more of its quality for one year than any other plant in an uncongenial soil: but, after the first year, it will deteriorate so as to be totally unlike the plant from which it sprung. But what a great difference there is between the trouble and expense of securing seed wheat and tobacco seed! A half pint of tobacco seed is more than any man's use, except for those who are engaged in planting. This half pint, if procured, I suppose, for a dollar, if there were a hundred planters, would make pleasure in procuring it. It is not a quantity but their own stock.

seed wheat are very troublesome and very onerous. We must submit to see these two orders of agricultural knighthood, the one decked with the plant of the golden leaf tobacco, the other with the full-eared sheaf of white wheat, without repining at their good fortune; and if their fame kindles the fire of ambition in our hearts, let us endeavour to rival them in taste, in judgment, in industry, and in exertion.

AGRICULTOR.

TO DESTROY WEEVIL.

J. S. SKINNER,

Salisbury, July 15, 1826.

Sir,—During the time I have been a subscriber to your journal, I have received from it much valuable information, and many hints that I have turned to my own advantage. I feel, therefore, bound, in my turn, to contribute what I think may be of advantage to others. My barn, for a number of years, has been infested with weevil, and I have tried every way that I thought would be likely to succeed to get clear of them, but all to no purpose until last winter, when I knew they were all below; that is, near to the ground. I introduced water in time of a thaw and heavy rain, so as completely to inundate the lower part of the building—and this I repeated two or three times, as opportunity offered before spring; and now I am as free from them as if there never had been one in the place.

I was induced to make the experiment from the following circumstance. Two years ago I purchased a farm, a short distance from me; here, for want of a little care and attention, the water was allowed a free passage through the barn and stables whenever it rained; and this is supposed to be the only one in the neighbourhood that has been completely free from this destructive little insect—and I knew of no other cause for it, except that they must (if there had been any,) have been destroyed by the dampness of the situation they had for winter quarters. I am, respectfully, yours,

THO'S G. HENDERSON.

(From the Memoirs of the Board of Agriculture of the State of New York.)

ON THE ADVANTAGES OF FALLOW-CROPS OVER SUMMER-FALLOWS.

By JAMES SPENNY, OF MONROE.

To Jesse Buel, Esq.

SIR,—In answer to your circular, I would observe, that I should not have presumed to furnish matter for a volume of the Memoirs of the Board, had it not been asserted, that "any facts, however simple, would be considered valuable."

I have carefully watched the progress of improvement in agriculture, in order to derive benefit from any system of cultivation, new and useful, which might be proposed. Although many improvements in the business of husbandry have been suggested, which would no doubt be of advantage to the farming interest, were they reduced to practice, yet I shall speak of but one, which I consider the most prominent, and that deserving the greatest attention; and which, if generally introduced, would save to the farmers of this state, annually, many millions. I mean the introduction of fallow-crops, and the abandonment of summer-fallows altogether, on green sward. The experience I have had in the system, confirms my belief, that all spring crops, such as oats, peas, barley and potatoes, may be raised on green sward, well ploughed, either in the fall or spring, and rolled with a heavy roller, with less expense in labour, and doubtless the nett profit, than on stubble land, and the expense of tending a corn crop on stubble land, and the expense of summer-fallowing. The poor land would be most of the

unexposed, while rotting, as it would be in receiving two or three ploughings, while in a partial state of decomposition, in the heat of summer, exposed to the influence of the sun, rains and winds. The first experiment I made of this kind was a crop of corn, on a stiff sward of spear grass, ploughed in the fall, and well harrowed in the spring, without rolling. My crop was 72 bushels to the acre, worth 50 cents per bushel. Nett profits, \$23 30 cts. per acre. The ground was well ploughed once next spring, and sowed to peas: crop, 32 bushels per acre, worth \$1 per bushel—Nett profits, \$25 10 cts. The peas were harvested early in September, and the ground well ploughed once, and sowed to wheat: crop, 31 bushels to the acre—Nett profits, \$22.90 to the acre. Nett profits in three years, \$71.30. I have this year raised corn on land adjoining, and of a similar soil and sod, (the soil is what farmers call a sandy loam,) managed in the same way, save only the crop was but once hoed: (wet weather prevented:) crop, 100 bushels to the acre. No manure was used; and not so much labour in tending, as stubble land would have required. In the same field, I sowed 60 roods of ground to flax, and harrowed it in well on the sod. The crop grew well, and was the best I have ever raised on any ground. It fell down and I pulled it while in blossom; after which I ploughed the ground once, and sowed to turnips. The turnips are very fine and promise a good crop.

Henrietta, Monroe Co., Oct. 18, 1824.

(From Brown's Treatise on Agriculture and Rural Affairs.)

ON MARL.

Marl, like lime, may be viewed as a stimulant, forcing the soil to produce crops of corn and grass, which otherwise would not have been obtained. Marl has been long known to the husbandmen of Great Britain; and, if we give credit to Pliny, this article was used prior to the Roman invasion. Several kinds are enumerated by the ancient Latin writers, and all of them declare that the soil was greatly enriched by the application of marl.

In many parts of this island the value of land has been much augmented by the application of marl. Treating of this article in a practical way, it may be divided into shell-marl and earth marl. Shell-marl is composed of animal-shells dissolved; earth-marl is a fossil. The colour of the latter is various; white, black, blue, red, and its hardness is as various as its colour; being sometimes soft and ductile like clay, sometimes hard and solid like stone, and sometimes extended into thin beds, like slate. Shell-marl is easily distinguished by the shells which always appear in it; but the similarity betwixt earth-marl and many other fossil substances renders it difficult to distinguish them.

Shell-marl is very different in its nature from clayey and stone-marls, and, from its effects upon the soil, is commonly classed among the animal manures. The Rev. Mr. Dickson states, "that it does not dissolve with water as the other marls do. It sucks it up, and swells like a sponge. It is a much stronger attractor of acids than they." Dr. Home says, that it takes six times more of acids to saturate it than any of the other marls which he had met with. But the greatest difference betwixt the shell-marl and the other marls consists in this, the shell-marl contains oils. It is uncertain if the other marls contain any oils; but this kind, it is said, contains them in great plenty.

This marl, it would seem, from the qualities which it possesses, promotes vegetation in all the different ways. It increases the food of plants; it communicates to the soil a power of attracting this food from the air; it enlarges the pasture of plants; and it preserves the vegetable food for entering the

The shelly sand, often found deposited in beds in the crevices and level parts of the sea coasts, is another substance capable of being employed both as a manure and stimulant; not only on account of its containing calcareous matter in greater or less proportions, but also from the mixture of animal and vegetable substances that are found in it. The portion of calcareous matter which it contains must vary according to circumstances; but, when the quantity is any way large, and in a reduced or attenuated state, the quality is so much the more valuable. On that account, the quantity which ought to be applied to the soil must be regulated entirely by the extent of calcareous matter supposed, or found, upon trial, to be contained in the article, which, as already said, is very variable.

The clayey and stone marls are distinguished by their colours, viz: white, black, blue, and red. The white, being of a soft crumbly nature, is considered to be the best for pasture land; and the blue, which is more compact and firm, for corn land. In the districts where marl is much used, these distinctions of management are attended to, though either of the kinds may be employed with advantage if the following rules are adhered to.

If marl is of the blue kind, or of any kind that is compact and firm, lay it upon the land early in the season, so as the weather may mellow it down before the last plough; and, if on pasture land, let it be also early laid on, and spread very thin, breaking any lumps afterwards which are not completely separated by the first spreading. If marl is of the white, or any of the loose or crumbling sorts, it need not be laid on so early, because these varieties break and dissolve almost as soon as exposed to the weather.

There are many kinds of impure and mixed marls, such as sandy, clayey, loamy, and stony marls, according as these varieties of soil are incorporated or mixed with the principal substance. These sorts, of course, are inferior to the pure marls; but the stony kind is considered to be the best, because its efficacy is more lasting, though the fat and crumbling kinds enrich or operate more speedily. The hard marls, however, in every case, operate for the greatest length of time, and are often followed with bad consequences to the soil, unless good management, with regard to cropping, is exercised during the period of their operation. After being long excessively fruitful and productive, the soil will gradually become so sterile and barren as scarcely to be worth cultivating; in which case, the greatest exertion can hardly procure a return of fertility. In this respect, the effect of over-cropping land that has been marled, is precisely the same as takes place with lime. An uncommon exertion is made, occasioning a proportionate debility, though, were good husbandry studiously practised, the exertion would neither be so excessive in the first instance, nor the after consequences so mischievous. In numerous instances, land has been reduced so much as to be thought little better than useless, by the effects of lime and marl. Both, however, are excellent agents in forwarding agriculture, though often their agency has been misapplied, and used for mischievous purposes. Under a correct rotation of cropping, and with a suitable supply of dung, neither lime nor marl is injurious. Reverse these circumstances, and the contrary effect must necessarily be produced.

[Orfila's Analysis of Marls, will be inserted in the next Farmer.]

PROSPECT OF CROPS.

EXTRACTS TO THE EDITOR—DATED

Sm, Retreat, St Simon's Island, Geo., July 8, 1825.

Owing to the late excessive drought which commenced here in February, the cotton crop was kept back very much; but the rain which commenced

about the 25th of May, and continued to fall in great quantities for three weeks, has in a great measure restored it; (and would have done much damage had it continued,) so that there is, I think, a very good prospect of a crop. One of my neighbours sent me to-day a pod of cotton of this year's growth; and my driver informs me to-night that he has seen several in the field to-day fit to pick. We shall probably commence picking about the 1st of August. I have got corn fit to grind; it was planted the 20th of February.

SIR,

Salisbury, Pa., July 22, 1826.

Our harvest has been well secured, and has proved a good crop; though not so heavy as the one last season, yet more difficult to cut, being much straw broken. The rye crop was not so good nor so extensive as in former years, and appears not to be so well filled; heads quite short, which I think was caused by the drought at the time of heading and filling. The present crop of corn presents a luxuriant appearance. There is a very large crop out in this county, and at this season I think there could not be a much better prospect of a heavy crop. Oats will turn out a very good crop, though during the drought it was feared we would have none; the late rains have improved them rapidly. Hay—scarcely half a crop was made in this section of the county. Yours, &c. E. B.

HORTICULTURE.

ON AMERICAN OPIUM.

[The following is an abstract of the various attempts at making Opium, in the United States.]

DR. S. RICKETSON, formerly of Dutchess county; New York, but now of the city of New York, cultivated the poppy in the year 1788, and found that the opium produced from it was quite as powerful as that imported. His paper first appeared in the "American Magazine," published at New York, in 1788; and was reprinted in the Medical Repository, vol. 1, p. 420. In the 3d vol. of the same work, p. 206, Dr. R. published additional experiments on the same subject. Those varieties of the poppy should be chosen, having numerous heads and strong stalks. Dr. R. found such a variety with large red or purple flowers, that proved much superior to all others he had seen: he tried the Asiatic mode of tapping the heads, and found that they yielded most plentifully from 8 to 12 days after the flowers had fallen: he however obtained the largest quantity of juice by cutting off the stalks, when the sun shines, about an inch below the flowers of the plant; and as soon as the juice appeared, by collecting it with a small scoop or penknife. After the juice ceased to flow, he cut it about an inch lower, and thus proceeded until the juice ceased to appear.*

The seeds may be sown at the distance of six or eight inches. He is convinced there is no difference in the quality of the produce, whatever variety or species be cultivated.

Dr. Anthony, of Petersburg, Georgia, in the month of January, 1810, sowed seeds of the true white or opium poppy, which came up in due time. The second day after the petals had fallen, he divided the exterior coat of the head in four places, at equal distances from each other: more incisions, he thinks, would tend to wound and destroy the head unnecessarily. The incisions were made at ten o'clock in the morning, and at twelve he collected the opium that hung therefrom, in tears from one inch to an inch and a half in length. Another bleeding, in the afternoon of the same day, yielded

* The careful country practitioner, who may raise opium in the above ways, should try the effects of the two kinds.

as much as was obtained in the morning. He carefully avoided penetrating the cavity of the head.—Every head made from 15 to 40 grains of opium; and they would have yielded more, could he have attended closely to the plants. A piece of ground, six yards by ten, produced more than half a pound of opium. He sowed the seeds at the distance of eight or ten inches apart, in drills, and about three-quarters of an inch deep: the drills were two feet apart. He thinks it necessary to sow the seeds in moist ground. Many of the full blown flowers measured from seven and a half to eight inches in width: the heads measured from two and a half, to three and a half inches diameter.*

Dr. Spalding, of Portsmouth, N. H. has also made opium from the white poppy; samples of which he presented to the Medical Society of the Eastern District of New Hampshire: he procured it by incisions in the heads, after the capsules were fully formed.†

The seeds should be sown in good ground, as early as the season, in the different parts of the continent, will admit; the plants must be properly watered, and kept clear of weeds. *Transplanting does not succeed.*

The poppy plant has been cultivated extensively by Mr. Ball and Mr. Jones, in England; both of whom have received premiums from the society for the encouragement of arts, agriculture, &c. The opium produced by them, was found by the London physicians, whose certificates are given, to be fully equal to the imported drug. For the statements of Mr. Ball and Mr. Jones, see Transactions Society Arts, vol. 18, and Medical Repository, vol. 1, p. 424; see also Domestic Encyclopedia, article "poppy."

The cultivation of the poppy plant, for the purpose of making opium, is particularly adapted to the southern states. Opium might form one of the articles that must be substituted for cotton, now that it is found much more of it is raised in the world than is required. But it is not likely that the hint will be taken; although the profit would be certain, if not great. Every physician in the United States, living in the country, might make all the opium he used, by raising the poppy: an employment that would not only prove amusing, but highly profitable to him.

Mr. Ball calculated, that supposing one poppy plant growing on one foot square of earth, produced one grain of opium; more than 50 pounds will be collected from one statute acre: but one poppy produces from three to ten heads, and in each head from six to ten incisions are made; from each of which he took two or three grains;—what then, he asks, must be the produce? Double, or semi-double poppies, gave more than twice the quantity produced by the single. [Archives of Useful Knowledge.

(From the New England Farmer.)

CULTURE OF CABBAGES.

SIR—

Westborough, March 30, 1826.

There has long been a complaint among farmers, of their cabbages *stump footing*, as it is called; that is, the roots as they grow, forming themselves into bulbs or small bunches, and as these increase in size, the top will decrease. Many preventives have been mentioned as effectual, such as hoeing often, and when the dew is on, using certain kinds of manure, &c. All these I have tried without success. The cause of the *stump foot* is in the soil. Few pieces of land, I believe, that have been for several successive years under the plough, will produce a good crop of cabbages, though there may be exceptions. My method of raising them, which I have practised several years with complete success, is the

* Philadel. Medical Museum, Hexade, 2d, vol. 1, p. 142.
† Medical Repository, Hexade 3d, vol. 1, p. 193.

following. In the spring take a piece of green sward, of good soil and free from stones, and turn it over with the plough as flat as possible; then spread on a large quantity of good manure, if it has been previously mixed with leached ashes the better, then harrow greatly, and early in June, if for winter cabbage, cut holes through the turf with a hoe, as near together as the cabbages ought to grow; fill the holes with the fine earth and manure, and then set the plants or put in a small number of seeds; I prefer the latter however, since it saves the labour of setting, and is much surer of success if it happens to be a time of drought. They will need no more hoeing than is necessary to keep down the weeds. In this way I have raised cabbages of the largest size in a green sward potatoe field, without more hoeing than was necessary for the potatoes.

LOVETT PETERS.

INTERNAL IMPROVEMENT.

CHESAPEAKE AND OHIO CANAL.

Conclusion of Mr. Stewart's Report on the Chesapeake and Ohio Canal, made in Congress, on the 19th May, 1826.

The Committee now beg leave briefly to present some of the most prominent advantages which the accomplishment of the Chesapeake and Ohio Canal promises to the United States, and which, in their judgment, will amply compensate for the cost of its construction; and

1st. *Its advantages in a political point of view.*—For their views on this branch of the subject, the committee will merely refer to the arguments and views of General Washington already quoted, and to the following extract from the Report of the Committee of Roads and Canals at the last session of Congress, in which they fully concur: when referring to the Chesapeake and Ohio Canal, the Committee say—"This object, regarded as the most important and national, was the first to claim the attention of the Executive in carrying into effect the provisions of the law of the last session, to procure surveys, &c.; and the able Board of Engineers, who have given the subject a full and careful examination during the last summer, have pronounced it perfectly practicable, at an expense small, compared with the magnitude and importance of the object. This work, whether regarded in a military, commercial, or political point of view, is equally important. Passing through the centre of the Republic, from one extreme to the other, opening an internal communication of more than 2500 miles, affording at once a powerful bond of the Union, with every commercial facility in time of peace; and in war, the most effectual means of national defence. Besides, its immediate connection with the seat of the national government; its central position; the great extent of inland navigation which it opens, touching in its course eleven states of the Union, and furnishing a vent for the produce of several others. The shortness of the canal by this route, connecting the Atlantic tides with the steam boat navigation of the west at Pittsburgh, being less than 350, and to Lake Erie, less than 450 miles.

"These considerations, together with the general and diffusive nature of the benefits to result from this work, offering great advantages to all the States, yet peculiar to none; as well as the magnitude of the undertaking, point it out as a work peculiarly national in its character, and cannot fail to secure for it the prompt and efficient aid of the general government."

2d. *Its Commercial Advantages.*—Some idea of the commercial advantages of this work may be formed, when the fact is stated, that the transportation of merchandise for the supply of the western states to Pittsburgh, in one year, has amounted to

one and a half million of dollars, and that the amount carried to Wheeling and other towns on the western waters, and wagoned on through Ohio at dry seasons, must have exceeded this amount; most of those wagons had return loads of agricultural produce, which, with the amount carried by farmers and others, would probably nearly equal the transportation westward; and should it amount to only half, still it would appear that the country sustains a tax for transportation of four or five millions a year; whereas, if this merchandize and produce were water-borne on canals, the cost would be reduced to less than half a million. The difference in cost being estimated as 10 to 1, though the usual estimate has been as 20 to 1; besides, the construction of the canal (as in New York,) would more than double the quantity of trade and commerce: thus the whole cost of the canal would be saved to the country in a few years, yielding, at the same time, on the stock invested, a profit of 6 or 8 per cent. to the government, more than the amount of interest accruing on the national debt, which the national creditors are anxious should not be paid, and also returning to the people a portion of the money paid by them into the treasury, to promote and cherish industry, trade, commerce, and manufactures, and these profits and advantages, of course increasing with the increasing growth and population of the country.

3d. *Its Advantages to Agriculture.*—These consist not so much in the saving in the cost of transportation, as in the powerful stimulus it would afford to agricultural industry in the interior and the increased value it would give to agricultural produce, and of course to the general wealth of the country. The difficulties under which the interior at present labours for want of facilities of transportation to the proper markets, are indescribable. Immense districts of the finest land in the world lay waste and uncultivated, because the produce will not bear transportation unless converted into spirit to brutalize mankind; forests of the finest timber, which might be sources of wealth, but encumber the ground; and often that which is in the greatest demand in one portion of our country, lies neglected and useless in another.

To illustrate the importance of this work to the interests of agriculture, the Committee beg leave to add one other statement. By the census taken in 1810, sixteen years ago, it appears that there was manufactured in that year, in a few of the western counties of Pennsylvania, 371,436 barrels of flour, and 38,722 of whiskey, making together 410,158 barrels—amounting to 62,261 tons; which, transported on the canal, at 2 cents per ton per mile, would cost 430,846 12 cts.; but if it had been transported in wagons to Atlantic markets, at that time, it would have cost upwards of five millions of dollars, and would at present cost more than \$2,500,000; thus it appears that a saving of more than five millions of dollars might have been produced by the Chesapeake and Ohio Canal on the transportation to the Atlantic markets, of the flour and whiskey alone, manufactured in 1810, in a few counties in the western part of Pennsylvania!—What then would be the saving on the infinite variety of agricultural, mineral, and manufactured products, not only of the western parts of Pennsylvania, but also of west Virginia, Kentucky, Ohio, Indiana, and, in short, all the interior and western portions of the Union, bordering upon the Ohio and its tributary streams? To which might be added an equal saving on the back loading of merchandise, transported on the canal, for consumption in the west.

4th. *Its advantages as to Mines of Ore, Coal, and quarries of Stone.*—The fact is too notorious to require repetition, that the mountains and interior portions of our country, and especially the region through which the Chesapeake and Ohio Canal is

located, abounds with inexhaustible mines of the richest ore, and the finest coal in the world, which lie hidden and useless in the bowels of the earth, for want of the means of transportation, and which might be made sources of unbounded profit and accommodation, adding millions annually to the national resources, giving profitable employment to labour, stimulating industry, increasing general wealth, supplying our country with means alike necessary in peace and war, and for which we are now dependent on foreign countries, and annually paying them a heavy tribute. Millions are annually sent abroad to feed and employ foreign labour, manufacturing and agricultural, to the neglect and injury of our own, to procure what abounds in the utmost profusion at home buried and dormant in the bowels of the earth, and required nothing but the plastic and vivifying influence of these facilities of transportation to spring at once into useful and prosperous activity, yielding not only an abundant domestic supply, but a surplus for exportation.

5th. *Its advantages in reference to villages, towns, water power, and manufactures.*—These are objects not unworthy of consideration. The facility and inducements offered throughout the whole extent of this canal, for the building up of villages and towns, and erecting an almost infinite variety of mills, furnaces, forges, and other water works, thus creating, as if by magic, busy scenes of active industry, hurrying commerce, and prosperous trade, where shortly before was a howling wilderness and desert. This is no picture of fancy, but matter of fact, to which every one who has passed along the New York canal, can bear ample testimony. And who can for a moment doubt that equal, if not greater results, would be produced on the Chesapeake and Ohio Canal, especially when they consider its decided superiority over that of New York, in the immense inland navigation which it connects and opens, touching in its extent from the Chesapeake to New Orleans nearly half the states in the Union, throwing into this common channel their surplus produce, and receiving through it their supplies of merchandise in return: to which may be added its superiority in reference to climate, central position, and the inexhaustible mountain supplies of coal, ore, and timber.

6th. *Its Military Advantages.*—In a country like ours, spreading over an immense continent, with an exposed military frontier of at least four or five thousand miles, depending for its defence at all times not upon standing armies, but upon the militia, the citizen soldiers, dispersed throughout every portion of the nation, the best and most efficient means of attack or defence will always be found in the facilities offered by good roads and canals, for the rapid concentration and rapid movement of the physical forces wherever their presence may be required, whether to repel invasion from abroad, or quell insurrections at home.

Nothing can so effectually deter the spirit of foreign aggression, or nip domestic treason in the bud, as the existence every where of those facilities by which the whole force of the country can be at once concentrated and precipitated upon it, crushing it in embryo, before it can mature its plans, or execute its designs. If proof were wanting to illustrate the advantages of roads and canals in time of war, the Committee would refer to the waste of blood and the waste of treasure during the late contest, produced by the want of these facilities—flour in many instances on the northern frontier costing one hundred dollars per barrel, and a thousand dollars for the transportation of a single piece of cannon, which on account of the delay were useless, the enemy having accomplished his objects before they had arrived at the places where they were required for the public service. But the Committee cannot better express their views on this branch of the subject, than by adopting the lan-

guage of the late Secretary of War, now Vice President of the United States, who, in his very able report to Congress in 1819, on the importance of roads and canals, in a military point of view, says:

"A judicious system of roads and canals, constructed for the convenience of commerce, and the transportation of the mail only, without any reference to military operations, is, itself, among the most efficient means for 'the more complete defence of the United States.' Without adverting to the fact, that the roads and canals, which such a system would require, are, with few exceptions, precisely those which would be required for the operations of war; such a system, by consolidating our Union, increasing our wealth and fiscal capacity, would add greatly to our resources in war. It is in a state of war, when a nation is compelled to put all its resources in men, money, skill, and devotion to country, into requisition, that its government realizes, in its security, the beneficial effects from a people made prosperous and happy by a wise direction of its resources in peace. But I forbear to pursue this subject, though so interesting, and which, the farther it is pursued, will the more clearly establish the intimate connexion between the defence and safety of the country and its improvement and prosperity, as I do not conceive that it constitutes the immediate object of this report.

"There is no country to which a good system of military roads and canals is more indispensable than to the United States. As great as our military capacity is, when compared with the number of our people, yet, when considered in relation to the vast extent of our country, it is very small; and if so great an extent of territory renders it very difficult to conquer us, as has frequently been observed, it ought not to be forgotten, that it renders it no less difficult for the government to afford protection to every portion of the community."

And after presenting a general system of roads and canals, including the Chesapeake and Ohio canal, now under consideration, he concludes by saying:

"Many of the roads and canals which have been suggested, are, no doubt, of the first importance to the commerce, the manufacture, the agriculture, and political prosperity of the country, but are not for that reason, less useful or necessary for military purposes. It is, in fact, one of the great advantages of our country, enjoying so many others, that, whether we regard its internal improvements in relation to military, civil or political purposes, very nearly the same system in all its parts, is required. The road or canal can scarcely be designated, which is highly useful for military operations, which is not equally required for the industry or political prosperity of the community. If those roads or canals had been pointed out which are necessary for military purposes only, the list would have been small indeed. I have therefore presented all, without regarding the fact, that they might be employed for other uses, which in the event of war, would be necessary to give economy, certainty and success to our military operations; and which, if they had been completed before the late war, would, by their saving in that single contest, in men, money and reputation, have more than indemnified the country for the expense of their construction."

7th. *Its advantages to the seat of Government.*

The effect of constructing the Chesapeake and Ohio canal could not fail to raise the city of Washington to the first rank among the commercial cities of the Union. With all the facilities for importation, it would stand several hundred miles in advance of the Atlantic cities, in reference to the commerce and trade of the interior and the west. Such a great and obvious advantage could not fail to attract the merchants and capitalists of the country, who are always quick to see, and prompt to seize every occasion that promises a profitable investure

of their funds—and the foreigners who visit the seat of the national government, from which they generally form their ideas of the whole country, instead of finding a dull and dispersed town, presenting nothing to gratify or amuse, would find a splendid city, with all the embellishments, fascinations and advantages, which ought to belong to the capital of a great nation. Besides, if mercenary motives could be permitted to influence on a subject of such national moment, even these would find ample gratification in the greatly enhanced value which it would give the public property belonging to the United States, in this city, consisting of upwards of 5000 building lots, with a large quantity of other grounds, houses and public property, estimated in 1820, at \$7,345,692, as well as in the diminished expense of living, produced by opening an easy communication with the finest markets in the world, and to the most abundant mines of the first rate coal—placing this city, for all the purposes of trade and intercourse, within a distance of Pittsburg not more than equal to 45 miles of transportation by land.

8th. *Its advantages to the sale and value of Public Lands in the West.*—It is believed that nothing is better calculated to induce and facilitate the sale and settlement of the public lands, than opening to them those facilities of communication by which they can convey to the best markets the products of the soil: for, without the means of arriving at a market, there can exist no motive, to stimulate industry or exertion. To shew the effects of roads and canals on the public lands, of which the United States own more than five hundred millions of acres undisposed in the west, the committee beg leave to introduce the following extract of a letter from the celebrated and lamented Robert Fulton to Mr. Gallatin, in 1808, on this branch of the subject:

"In all cases, he says, where canals shall pass through the lands of the United States, and open a cheap communication to a good market, such lands will rise in value for twenty miles on each side of the canal. The farmer who will reside twenty miles from the canal, can, in one day, carry a load of produce to its borders; and were the lands 600 miles from one of our sea-port towns, his barrel of flour, in weight 200 lbs. could be carried that distance for 60 cents, the price which is now paid to carry a barrel 50 miles on the Lancaster Turnpike. Consequently, as relates to cheapness of carriage, and easy access to market, the new lands, which lie 500 miles from the sea ports, would be equal in value with lands of equal fertility, which are 50 miles from the sea ports. But not to insist on their being of so great a value until population is as great, it is evident that they must rise in value in a three or four fold degree every lineal mile of canal would accommodate 25,600 acres. The lands sold by the United States, in 1806, averaged about two dollars an acre, and certainly every acre accommodated with a canal, would produce 6 dollars. Thus, only 20 miles of canal, each year, running through national lands, raise the value of 512,000 acres at least four dollars an acre, giving 2,048,000 dollars to the treasury, a sum sufficient to make 136 miles of canal. Had an individual such a property, and funds to construct canals to its centre, he certainly would do it for his own interest. The nation has the property, and the nation possesses ample funds for such an undertaking."

9th. *Its advantage in reference to currency.*—The committee have already referred to the exhausting and injurious effects of annually withdrawing from active and profitable circulation, fifteen million of dollars a year, and applying it to the discharge of the national debt, as proposed by the committee of Ways and Means; and have suggested the propriety of confining the payment of the national debt to ten millions of dollars a year, according to the existing sinking fund, and applying the surplus five

millions of dollars to Internal Improvements; which would be as much as could be economically and judiciously expended, at the commencement of the system. It would be sufficient to afford employment, and give skill and experience to our engineers, by the time the national debt is extinguished, in 1833; and the annual surplus, applicable to these objects, increased to 15,000,000. It would also, be returning in the mean time, a portion of the money, (drawn from the people by taxation,) to sustain and carry on the several branches of agricultural and manufacturing industry, and at the same time, equalizing in some degree, at least, the expenditure of the public money: for it is a fact, worthy of grave consideration, and susceptible of the clearest proof, that of the twenty odd millions which are collected annually, alike from every portion of the country, there is not expended by the government, in the whole of the interior and western states, as much annually as has been expended on the sea coast, in the building and equipping a single ship! or half as much as has been expended in the erection of a single fortification! This consideration, in the judgment of the committee, strengthens the claims of the interior and the west, to a participation in the common means of the country, to which they contribute their full proportion.

10th. *Its advantages in reference to the diffusion of knowledge and intelligence.*—Nothing, perhaps, in a country so extensive as ours, tends more to the rapid dissemination and diffusion of knowledge and intelligence, among the people at large than good roads and canals. They bring distant parts of the country more nearly together; promote trade and intercourse, and create friendly and social relations among those, who, otherwise, would have, perhaps, remained not only strangers, but estranged from each other, by a diversity of feelings, views and interests.

11th. *Its advantages as relates to revenue, profits, &c.*—On this branch of the subject, looking to the extent of navigation opened by this canal, connecting by the nearest possible route, all the eastern and western states, passing through the heart and centre of the country, traversing parts the most fertile and populous, and abounding with inexhaustible supplies of ore, coal and timber, the committee think they hazard nothing in expressing the opinion that this cannot fail to be one of the most profitable and productive canals, that has been, or can be constructed in the United States; constituting, as it must, the great artery of communication, and receiving the joint contributions of the Chesapeake, Ohio and Mississippi rivers. This canal in fact, has a decided advantage over the canals constructing along the Atlantic sea-board, in this, that the canals running near and parallel to the sea-board, (to which the United States have liberally contributed,) are mere improvements of an existing navigation, along the coast; but this canal, penetrating the interior and western portions of our country, is not an improvement, merely, but it is the creation of a navigation, where none before existed, and which, of necessity, must, and will be used by all; and this accounts for the profits of the New York canal, over which, the superiority of the Chesapeake and Ohio, in reference to climate, position, and distance, has been already demonstrated.

The tolls on the New York canal, during the year 1824, amounted to \$340,761 07; in 1825, to \$566,221 51; and for 1826, they are estimated at \$750,000 00, exceeding 8 per cent. per annum, on its cost, at the low rate of one cent per ton per mile, on all agricultural and country produce, and three cents for merchandise, which, with the duty on salt and auctions, will give a surplus of \$577,000 a year, to discharge the principal, after paying the interest on the debt, and all the expenses of repairs, collections, &c. amounting to \$550,000. The number of boats and rafts which passed on the canal from 9th

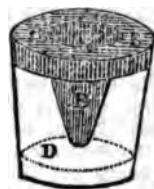
April to 12th December last, was 13,100, carrying 219,074 tons; 185,405 bound to, and 33,669 from, the city of New York; amounting to 42 boats per day, and the number of passengers exceeding 40,000.

But the Chesapeake and Ohio Canal is, in every point of view, more important than that of New York. It not only furnishes a connexion between the Atlantic and steam boat navigation of the Ohio, at much less than half the distance of the New York canal, but, commencing at the seat of the National Government, it opens a direct internal navigation of near 2,500 miles, through the centre of the union; while the New York canal passes through but a single state, and terminates on our northern frontier. And, besides, the Chesapeake and Ohio Canal has also the advantage of the coal trade of Cumberland, and the timber and iron mines of the mountain, which nature has denied to New York, and being four degrees farther south, will remain, at least two months in the year longer unobstructed by ice. But, should the results only equal those of New York, the committee think the Government ought immediately to commence, and vigorously prosecute it to its final completion, and might add, in the language of General Washington, who, more than forty years ago, when urging Congress to engage in this great work, said, "*our interest is so much in unison with this measure, that nothing short of that ill-timed and misapplied parsimony, and contracted way of thinking, which intermingle so much in our public councils, can counteract it.*" Will not those who oppose this measure now, become obnoxious to this emphatic denunciation of the Father of his Country?—who, were it permitted to him to descend, and mingle in our present deliberations, might repeat it to us with much greater propriety, and stronger emphasis.

As the final report and estimates of the Board of Internal Improvement will not be completed before the close of the present session, and as it would not in the judgment of the committee, be advisable to legislate on the subject until that report is communicated, they therefore submit the following resolution:

Resolved, That the committee be discharged from the further consideration of the subject, and that it be referred to the early and favourable consideration of the next session of Congress.

LADIES' DEPARTMENT.



AN EFFECTUAL AND EASY MODE OF DESTROYING FLIES.

To enter into any argument, or advance any facts, to prove the destructive effects of flies in shops and dwelling-houses, is quite unnecessary; and it is equally well known that liquid compositions are generally used to destroy them, which renders their dying effects still more destructive to goods and furniture.

The following plan will not only be free from the above objection, but is of such a simple nature that any one may readily adopt it. It consists simply of a small tumbler glass, as shown by the annexed figure: to this glass is attached a writing paper cap and funnel, represented by B B B. The funnel is inserted into the paper cap, and its inverted cone reaches the liquid D, (within about 3-8ths of an inch,) which is a weak solution of arsenic and honey, or what is generally sold as *fly-water* by chemists.

The entrapping principle of this little apparatus depends on the following circumstances:—The flies pass through the funnel in order to arrive at the liquid; and, not having the power to recollect the way they entered into the glass, they remain prisoners and quickly die, from the effects of this poisoning liquid, which they readily drink.

After a few prisoners have passed through the funnel, they induce others to enter into the glass more freely, and facilitate the work of destruction.

[*Liverpool Mercury.*]

ON CLEARING FEATHERS FROM THEIR ANIMAL OIL.

By MRS. JANE RICHARDSON.

(From the Transactions of the Society for the Encouragement of Arts, Manufactures and Commerce.)

Take, for every gallon of clean water, one pound of quick-lime; mix them well together; and, when the undissolved lime is precipitated in fine powder, pour off the clear lime-water for use, at the time it is wanted. Put the feathers to be cleaned into another tub; and add to them a quantity of the clear lime-water, sufficient to cover the feathers about three inches, when well immersed and stirred about therein.

The feathers, when thoroughly moistened, will sink down, and should remain in the lime-water three or four days; after which, the foul liquor should be separated from the feathers, by laying them on a sieve to drain.

The feathers should be afterwards well washed in clean water, and dried upon nets; the meshes of which should be about the fineness of those of cabbage-nets.

The feathers must, from time to time, be shaken upon the nets: and, as they dry, they will fall through the meshes; and are to be collected, in order to be beaten, as usual, for use.

The admission of air will be serviceable in the drying; and the whole process will be completed in about three weeks.

To test the value of the foregoing process, several samples of feathers were furnished to Mrs. Richardson, all of which were returned perfectly cleansed from their animal oil; one parcel had been stored for three days, but still retained their unpleasant smell, which was completely removed by the lime-water.

After the feathers have been cleansed and dried, they are put into a strong bag, like a bed-tick, which is laid upon a stage, and beaten with long poles, like broom-handles, until the feathers are perfectly light and lively.

[*Franklin Journal.*]

SPORTING OILIO.



(From the Petersburg Intelligencer.)

ANNALS OF THE TURF—No. VII.

Respectfully inscribed to the Amateur, the Sportsman and the Breeder of the Virginia Turf Horse.

ON CROSSING, BREEDING, AND REARING THE TURF HORSE.

The subject of crossing is one of the most important which has ever engaged the attention of the breeder or amateur, and it is still left in doubt whether we ought to adhere to remote crossing in propagating the race horse, or that we may successfully breed "in and in," viz: putting horses and mares together of the same family.

All that we can do is to disclose the facts which

that unerring guide, experience, has established, and the exceptions to the rule which those facts have pointed out to us. Crossing, or intermixing the blood of different racing breeds, has ever prevailed upon the turf, and experience has proven it to be a rational practice, when adopted with the view of an interchange of the requisite qualifications, external or internal; such as the union of speed and bottom, slenderness and substance, short and long shapes.

Experience tells us that the greatest success has ever attended those breeders, and that the most valuable stock has resulted therefrom, who have adhered to remote crosses. The finest running and highest formed horses that have appeared in England, were bred from the union of two distinct stocks, the Herod and Eclipse. The former stock was invariably remarkable for stoutness and lastingness, the latter for speed; and by the union of these opposite qualities (whereby a remote cross was kept up,) a stock was obtained in which was blended a sufficiency of the requisite qualities of both to make first rate running horses. There was another distinct stock in England, which crossed well upon the Herod and Eclipse branches; I allude to the Matchem or Godolphin Arabian stock; and it may be here remarked, that there has not been in England a first rate runner on the turf for the last 70 years, without more or less of the blood of this valuable horse. However necessary a remote cross may be considered, yet exceptions have arisen to it as a rule, as some of the most distinguished horses in England were bred considerably in and in—Flying Childers, for instance, considered the fleetest horse in the world. Old Fox, also a celebrated racer and valuable stallion, had an affinity of blood in his pedigree, as well as other high formed racers and stallions. But these exceptions arose in Great Britain in her early days of breeding, when that country was enriched by the importation of particular Barb, Turk and Arabian horses that had peculiar and extraordinary properties as stock getters, as their immediate descendants constituted the best racers of those days, and demonstrated that the character of the English race horse had attained its utmost perfection at that early date.

At a later period, but little success had attended the efforts of those who have bred in and in. The Earl of Egremont has occasionally tried it, as well as Lord Derby, (the owner of Sir Peter Teazle,) but with little encouragement. Still the British writers are divided on the subject. Morland, in his treatise on the genealogy of the English blood horse, expressly says, that incestuous crosses should be avoided, viz: putting horses and mares together of the same class; while on the other hand Lawrence, in his splendid work on the "History and delineation of the race horse," makes the following remarks of an opposite tendency: "An adherence to the practice (of remote crossing,) cannot be held indispensably necessary on any sound theory; nor need any disadvantage be apprehended from coupling horses and mares of the same breed or family, even the nearest relative, upon the principles above and hereafter laid down. I have often heard of, and indeed seen, miserably leggy and spindled stock resulting from such a course, but other very visible causes existed for the result."

"According to the adage, 'like produces like,' we ought to follow form and qualification; and if a brother and sister, or father and daughter excel in those respects all others within our reach, we may enjoin them with good expectations, for aught I know, to the end of the chapter; and the prejudiced fear of adopting this practice, has often led our breeders into the error of adopting an inferior form from the presumed necessity of a cross." The present remarks are peculiarly applicable to the breeders of the race horse in Virginia, for they are at this very time making the experiment of breed-

lag "in and in," or from the same family of horses, as it is well known that all the turf horses now and for the last ten years past produced in that state are of the "Sir Archy stock." It were to be wished that there was a greater variety of the race blood in that state to give breeders a wider field for selection: a descendant of Medley or Citizen would cross well upon the present numerous stock of Sir Archy, and it would perhaps have been a fortunate circumstance, could the celebrated horse Pacolet (who was bred and raised in Virginia,) have been retained in that state.

The subject of breeding is the next which claims our attention.

The business of breeding is divided into the systematic and chance-medley; the formation of regular studs and observing some fixed principles, characterize the former; while the latter is a kind of random affair, common to the whole country where foals are raised for a man's pleasure or convenience, for which no extra preparations are made, or much reflection bestowed, farther than to make use of any mare that may chance to be in possession, and of any horse which the vicinity affords or custom may present.

In the formation of studs, the object generally had in view is breeding for the turf, and one of the first principles is to breed from no stallions unless they be thorough bred; in plain terms, both their sires and dams must be of the purest blood of the Turkish, Barb or Arabian Coursets exclusively, and this must be attested in an authentic pedigree, throughout whatever number of descents or crosses.* The brood mare should be equally pure or thorough bred, and particular attention should be paid to her form, as one of the prime causes of failure with most breeders is confining their attention solely to the horse, without paying sufficient attention to the form of the mare, and permitting fashionable blood and the supposed necessity of a cross to have too decided a preference to correctness of shape. To constitute a thorough bred animal, and to assure the attainment of every desired quality or perfection, both the male and female ought to possess it. Experience has proven the correctness of the principle that "like produces like"—acting upon this principle, we have the best assurances to expect success from a junction of the best shapes, or the greater number of good points we can combine, both in the horse and the mare; from such a junction the average will be favourable, true form will result from the union of true form, in both sire and dam: and the next general result will be, that every horse sufficiently well formed, and furnished in the material points, will excel either in speed or continuance, or will possess an advantageous mixture of both.

Blood is blood, but form is superiority.

In rearing of turf horses, the following principles are recommended by the most successful breeders. The land to be dry and sound, the harder the better, provided it be fertile; irregularity of surface a recommendation. Fresh springs or streams, shade and shelter, and extensive range. Sufficient number of enclosures, both for each species, which it is necessary to keep apart, and to prevent too great a number of any being crowded together. Houses or sheds in the inclosures; soft and sweet herbage for the colts and milch mares; and finally a very liberal allowance of land in proportion to the stock, that there may be not only ample grazing in the

*There is a practice in Virginia and North Carolina, in giving the pedigree of a stallion, to name only one or two crosses, particularly on the dam's side, and then pronounce him "the finest bred horse in the world." Who can pronounce on a horse's good or bad blood unless we know the whole of it? He may trace to the common dray breed of the country for aught we know.

grass season, but an equally ample quantity of provisions of the requisite kind during the winter.

A firm, dry, and hard soil, will have a corresponding effect upon the feet, limbs, and tendinous system of horses bred upon it; as will a dry, clear and elastic air upon their wind, animal spirits and general habit. Such are the advantages enjoyed by the horses of the mountain and the desert; but these advantages are greatly enhanced in a country where abundant herbage and moderate temperature are superadded.

All breeders concur in the propriety of keeping colts well the first and second winters; for colts from the best shaped parents will degenerate upon insufficient nourishment, and be stunted from the palsy effects of damp and cold in the winter, if a comfortable and genial shelter is not allowed them. Good keep, and warmth, during the first and second years, is indispensable, in order to invigorate the circulation of the animal's blood, to expand his frame, to plump up and enlarge his muscles, to encourage the growth of his bones, and to impart to them that solidity and strength which preserves them in the right line of symmetry.

AN ADVOCATE FOR THE TURF.
(To be continued.)

DISEASES OF DOGS.

BLEEDING.

In speaking on this subject, I am not supposing that the sportsman is a member of the medical profession in any of its branches, but sufficiently skilled in anatomy to know a vein from an artery, which is all the knowledge requisite to perform the operation of bleeding a dog. A vein* may be distinguished from an artery by its having no pulsation; if an artery of any consequence should be divided, the blood will flow in irregular gushes; it will be difficult to stop, (for I know of no other method than sewing it up,) and may cause the death of the dog. However, there is little danger of such an unpleasant circumstance happening, and an ordinary degree of attention is quite sufficient to obviate it. The most convenient and the best place to bleed a dog, is to open a vein (the jugular vein,) in the side of the neck, round which a cord should be tied; and if the sportsman is not expert at handling a lancet, he may purchase a fleam at any of the shops where surgical instruments are sold, which, by means of springs, is so contrived that the greatest bungler need be under no apprehension. Those who sell this instrument will describe the method of using it, which indeed is so obvious at first view as to render elucidation superfluous in this place.

If, after the vein is opened, the animal should not bleed freely, pressure a little below the orifice will cause the blood to flow. Where sufficient blood has been taken, the bleeding will generally subside; should this not be the case, a little fur from a hat will stop it; or if the sportsman be very anxious, he may draw the lips of the orifice together with a needle and thread.

COLD AND COUGH.

A cough arises from an irritation of the lungs, and may be produced by a cold or otherwise; it is generally the effect of cold, and may be removed by

Antimonial powder, five grains,
Calomel, four grains,

made with honey into two bolusses, and given in the evening for two nights successively.

If a dog should be afflicted with a cough, in the first place, examine his throat, in order to ascertain if any pieces of bone are lodged there, as such a circumstance will cause a dog to cough for weeks.

*A vein carries back the blood to the heart; an artery brings the blood from the heart.

If the cough arises from cold administer a couple of syrup of buckthorn. Should the cough continue, give tartar emetic as described under head *Distemper*.

SCAB IN THE EARS.

A little mercurial ointment rubbed upon the affected part every two or three days, will have effect a cure.

CANKER IN THE LIPS.

Rub the affected parts with alum-water three times a day.

Or, rub with bole ammoniac and burnt alum or three times a day.

FILMS IN THE EYE.

Bathe the affected part twice a day with in which a little vitriol has been dissolved, (of a large horse bean to a pint of spring water) and in a minute or two wash it in clear water. Or bathe with the following lotion twice:

Sulphate of copper, one scruple,
Water, four ounces.

SPRAINS.

Sprains are painful swellings of the ligaments and tendons of the joints, and are caused by great exertion of the limbs, of which the muscles become relaxed. They should be well rubbed the following twice a day:—

Camphor, two drachms,
Brandy, one ounce;

when the camphor is well dissolved, add on of sweet oil, and shake them well together. If not this have the desired effect, try the following:

Spirit of hartshorn, two drachms,
Sweet oil, six drachms,

well shaken, and applied as the other. Spoonful or two of syrup of buckthorn.

N. B. As sprains are attended with inflammation, which should be got rid of in the first place by fomenting with warm water four or five days, and the following lotion applied:—

Extract of lead, two ounces,
Water, one pint.

Should any stiffness remain after the inflammation has totally subsided, apply a blister.

(To be continued.)

MISCELLANEOUS.

SALE OF SAXONY SHEEP.

A flock of Saxony sheep, consisting of 1 ram and 50 ewes, which were imported in the upper part, from Bremen, were sold on Thursday, Brighton, near Boston, for \$4083—averaging \$18.64 for each sheep. The lowest price one was \$7, and the highest \$67.50.

At a similar sale at New York on the 11th, 38 bucks and 40 ewes averaged about \$27 each.

White wine has been made of the native grapes growing in Bartram's Garden, near Philadelphia, of a superior quality. Col. Robert Carr, the proprietor of the gardens, besides the grapes consumed at home, and those to be made into wine, expects to have at least 3000 pounds of grapes in the market for sale.

WARTS.

Away with the idea, ye sons and daughters of fiction, that charms and witchcrafts are necessary to remove your Warts; rub them with sweet turpentine and they will soon lessen—gradually—yea, vanish for ever! [N. J. Adams]

*A table spoonful is a dose for a common size.

[† See ante, No. 16, page 125.]

[‡ See also the article "Inflammation" in number of Am. Farmer.]

AGRICULTURE.

ON SMUT IN WHEAT.

By William Young, of Brandywine, Delaware.

(From the Memoirs of the Phila. Agr. Society.)

I herewith send a sample of wheat, which produced a considerable quantity of ears filled with smut balls, in place of grain. The seed from which it was raised was procured in this neighbourhood last October, and had been sown for four years, on the same farm, and deemed of the best quality. In the harvest of 1805, for the first time, a mixture of smut was observed. It was not, however, to that extent, as to be considered deeply injurious to the grain, which was of course sown upon several farms, and upon different fields in the same farm, from September to December, under various aspects, and in every situation, it produced a considerable proportion of smut balls in the harvest of the present year. I had part of two fields sown with it; the one a south, the other a north aspect. Carolina white, Virginia early, and red chaff bearded wheat, were contiguous in the respective fields. There was not a ball of smut found, except that from which the sample is sent. Nor was it found on any of the other farms, except when the seed was sown from the same stock. And even the same species of wheat, procured from another farm, and sown on one of my fields, produced no smut balls.

The farinaceous part of the grain, into which the smut adhered, was perfectly pure, after the smut was removed at the barley mill.

It is evident, that the seed produced in 1805 was infected by a kind of hereditary disease, occasioned by the smut, which burst from the balls during the act of threshing, and lodged in the small beard on the plume end of the grain, preventing or impeding the process of vegetation in the plant, in its embryo state, withholding the power required to mature the grain at a certain period. It becomes a matter of no small import to investigate the causes of this disease; for although smut has not prevailed in the states of Pennsylvania, Delaware, and Maryland, it has been highly injurious in the remote counties in the state of New York, and in the valley of Shenandoah: and it some years ago made its appearance in a field of wheat in this neighbourhood, the seed of which was brought from New York.

If any favourite species of wheat shall be introduced amongst us infected with smut, the disease might have a rapid increase; when, perhaps, the evil might be ascribed to that sort of wheat, or an unfavourable state of the atmosphere, rather than to a disease inherent or attached to the seed.

The foregoing facts inform us, that smut is sometimes produced from seed, which had no mixture of it, as in the harvest of 1805. At other times, it is the native offspring of the purest grain, infected with, or having smut thereon, as in the harvest of 1806. The first may arise from an unfavourable state of the atmosphere, or more frequently from some radical defect in the seed sown. When the early advances of plants are vigorous, and the infection of all sorts of wheat, at an after period, general, there is reason to presume, that the disease arises from some external circumstance, such as a hot sun, after heavy rains, continued moisture to excess in the atmosphere, while at an high temperature, with high wind prevailing in a continued draught, while the bloom of farina is present, and milk in the corn.

But when the complaint is local, unless the aspect is of the same kind, there is reason to conclude the seed has been in some respect imperfect. And being unable to produce the farina, and mature the grain, an abortion takes place, and the result is the same, but not attended with all the

symptoms of that sown with the smut adhering thereto. This was the case in 1805; the smut had no offensive smell, while the produce from the grain in 1806 was highly offensive, bearing a resemblance to that arising from putrid fish, and continued so, notwithstanding the low temperature of the atmosphere. This may readily be perceived by rubbing a smut ball between the finger and thumb.

The reason why the smut had no offensive smell in 1805, was, the disease seems to have progressed more slowly, and the fetid effluvia carried off by the partial perspiration, remaining in the plant.

The introduction of smut may be prevented by careful selection and preparation of the seed. The washings recommended by the best agricultural authorities, are to be performed, and all imperfect grain rejected; for it frequently happens, that although the principles of vegetation are not extinguished, the powers for maturing the grains are destroyed. The smut stated as having made its appearance in the harvest of 1805, seems to have originated in this way. No other farms in this neighbourhood were infected, or contained any mixture of smut, except that alluded to in this paper.

The smut which made its appearance in the harvest of 1806, was evidently a species of hereditary disease, arising from the smut adhering to the beard of the grain sown, which had fixed itself on the pure grain (after being put into motion by the operation of threshing,) where it appears deposited in the form of a fine, oily, vegetable mould.

It is as yet unknown, by what means smut becomes so pernicious to the offspring of the plant, arising from the grain to which it adheres. It does not produce any fungous matter, which might prove injurious to the root, or stalks of the plants: for their vigor and appearance were not surpassed by any in the same field. There is no apparent disease until after the appearance of the bloom or farina, but then its progress becomes rapid and destructive. For while the plants from the uninfected grains display vigor and health in the richness and activity of their farina, the ear at the same time assuming the texture and properties of grain, the farina of the infected is dead and pallid, adhering to the external coating of the ear, as if it were some foreign matter pasted thereon. Sterility and deadness then universally prevail, and the perspiration of the plant is at an end. The moisture which had been drawn up from the roots, becomes stagnated, and finally returns to the roots, visibly discoloured, as if it had been steeped in impoverished ley: the stalk for some time continues green, which finally terminates in yellow rust over the whole; the milk, which abounded in the ear, in place of assuming the texture and properties of grain, becomes a putrid mass, and so far as it remains insulated, by the coatings intended for farinaceous matter, and secluded from the air, it produces that offensive smell already stated.

These are facts which introduced themselves in the harvests of 1805 and 1806; they are now produced, that every reader may consider the plant before him, and draw such conclusions as arise out of the premises.

Another fact may be added, that some grains which tillered, you will find produced stalks with perfect ears of grain, others from the identical grain, produced smut balls; but in no instance were grain and smut balls found in the same ear, as stated by some observers.

I shall conclude this communication with such reflections as arise from the circumstances laid before you.

1st. That imperfect or damaged seed yields a diseased crop, and under the circumstances last stated, the disease becomes hereditary. It is reasonable to conclude, that part of the seed sown in 1804 was damaged, for it produced a mixture of smut, while all the farms in the neighbourhood

were exempted from that disease in the harvest of the next season.

2d. The disease in the harvest of 1806, from seed of the infected crop of 1805, assumed an hereditary aspect. Wherever the seed from the crop of 1805 was sown, and in those places only, smut appeared in 1806.

I am aware of the danger of submitting hypothesis, in place of facts, for consideration. It may, nevertheless, be proper in the present case; for as every act of the judgment is right or wrong, true or false, the hypothesis, if wrong, may invite that solid information, which otherwise would have been excluded from the public eye.

It is therefore presumed, that the smut of the harvest field of 1806, arose from a privation of the action of the beard (which is on the plume end of the grain of wheat,) in the economy of vegetation. The office of that beard, in the embryo state of the plant, is either to generate, act upon, or in the vessels producing the bloom, or farina; for if these vessels are imperfect, or the action required be wanting, all the mutual advantages which result from the perfection of the farina, and its operations will cease; instead of grain, there will be a putrid mass, as in the sample before you. Every one will allow, that the beard is formed for some important function, in the service of the plant. It is here where the cause of the disease exists; when the smut is removed from the beard, perfect grain is produced; when it is suffered to remain on the beard, smut is produced. It is then in some measure conclusive, that the diseased ears neither receive nor communicate the farina. For until this period, all the usual functions were performed, so far as inspection could determine; afterwards all the operations of the plant toward maturing the grain are at an end.

It may be objected, if the disease arose from the impaired functions of the beard, and the consequent imperfection and inactivity of the farina; that the identical grain would not, at the same time produce healthy and diseased ears, as stated. It may be answered, that upon examination of the grain with a glass, many of the beards on the identical grain, were free from the smut when sown. The office of such would therefore be performed in the same manner, as if no disease had existed on the grain wherein they acted. It is reasonable to conclude, that although their intercourse with the farinaceous part of the grain is minute, yet their ramifications are independent, as well as the leaders of the respective parts of the plant, to their proper offsets, the independence of which has been proved, by frequently parting the offsets and planting a part, in which cases they matured the grain with an increase of some hundred fold. Each member of those offsets, radically pure and perfect, although subdivided to a great extent, performed its respective function in vegetation.

The washing recommended, is merely to remove the smut and imperfect grain; whatever is found most effectual for that purpose, is deemed the most expedient. No dependence is placed on various steepings, as it is presumed that plump seed, well kept, and laid in a soil well prepared, is the best security against smut and every disease.

Since writing the above, I have met with a case of a palm tree, somewhat analogous to the hypothesis; the *palma major, foliis flabelliformibus*. A tree of this kind had, for thirty years, flowered and borne fruit in a garden of the Royal Academy at Berlin, but the fruit never ripened, and when planted did not vegetate. There was a male plant of the same kind in a garden at Leipsic, twenty German miles from Berlin; from thence a branch of the flowers was procured, and suspended over the tree at Berlin; the experiment produced ripe fruit; next year it was repeated, and the palm tree produced above 2000 ripe fruit. The fruit vegetated, and

produced young palm trees. See *Hunter's Geographical Essays*, York edition, p. 432.

[Remarks on the foregoing, with additional Observations on Smut, and the means of preventing it—by James Mease, M.D., will be inserted in the next Farmer.]

(From the Memoirs of the Board of Agriculture of the State of New York.)

ON LIMING SEED WHEAT.

By James M^cCall, of Allegany.—Jan. 26, 1825.

SIR,—In answer to your inquiry on the subject of smut in wheat, I will state to you what has fallen under my observation.

When I resided in Seneca county, several years ago, my attention was particularly drawn to this subject, by observing, that while myself and neighbours were much injured by smut in our wheat, the crops of Mr. C. uniformly escaped. I inquired into the cause of this singular exemption, and learnt that it was owing to the seed having been limed.

In 1816, therefore, I washed my seed, put about three pints of lime to each bushel, mixed it well, and let it lie in a heap twelve hours before sowing. My crop was perfectly clean, while I can say all my neighbours had more or less smut.

In 1817, part of my seed was washed and limed, as in the preceding year; another part was washed and limed, and a pint of salt to each bushel mixed with the lime; a third parcel was washed in strong pickle and limed; and a fourth sown without any preparation. The result was as follows: The first had a little smut; the second none; the third none; and the fourth was a quarter smut—all on the same kind of land, and all sown in good weather, between the 5th and 15th of September.

In 1819, Mr. L. bought his seed of my neighbours, Mr. B. and Mr. G. and of myself, and sowed all without preparation. Mr. G's crop was from seed had of me the year before, and sowed without liming. B. had never prepared his seed by any process. It was found, on harvesting the crop, that the part sown with my seed was free from smut—that sown with G's seed had a little—and that sown with B's seed was one fourth smut. This statement I had from Mr. L. I mention this circumstance to show, that seed wheat well cleaned as mentioned, will have an effect for two or three crops; but I would never recommend to sow wheat without salt and lime.

As the Hessian fly has never yet troubled us in Allegany, I am unable to speak of the efficacy of preventing the ravages of that insect.

I beg leave to suggest to farmers, the propriety of spreading their straw upon their pasture grounds, either in spring or fall. It will shield the ground from the extreme cold which often breaks the fibrous roots of the grasses. In summer it shields the ground from the scorching rays of the sun, prevents the evaporation of moisture, fertilizes the soil, and causes a strong rich sward; and when ploughed, will be equal to a good coat of manure.

J. BUEL, Sec'y, &c.

JAMES M^cCALL.

ORCHARDS.

(From Agricultural Essays.)

The utility of an orchard, or orchards, both for private use and profit, stored with the various sorts of fruit trees, must be very great; as well as afford infinite pleasure from the delightful appearance it makes from early spring, till late in autumn; in spring the various trees in blossom are highly ornamental; in summer, the pleasure is heightened by observing the various fruits advancing to perfection; and as the season advances, the mature growth of the different sorts arriving to perfection in regular succession, from May until the end of October, must afford great delight as well as profit. The

feelings of a lover of improvement can scarcely be expressed, on observing the almost universal inattention paid to the greater number of our orchards, and that people who go to a considerable expense in planting and establishing them, afterwards leave them to the rude hand of nature; as if the art and ingenuity of man availed nothing, or that they merited no further care; however, it is to be hoped, that the good example, and the consequent success of the careful and industrious, will stimulate others to pay the necessary attention to these departments, and thereby to serve themselves as well as the community at large.

As orchards, in their general acceptation, comprehend a variety of fruit trees, it may, perhaps, be proper to remark, that the observations which will follow under this head, will be exclusively confined to apple trees. There is no other fruit tree which so richly deserves the attention and cultivation of the husbandman, as the apple; it will thrive and live in almost every climate; it yields a fruit equalled by none in abundance and excellence, and a liquor, which, if properly made, is little inferior to the best wine.

It behoves every philanthropist to encourage the cultivation of orchards and the making of good cider; by way of discouraging the too general use of ardent spirits. Good cider would be a national saving of wealth by expelling foreign liquors; and of life, by expelling the use of ardent spirits.

The mismanagement of apple trees often begins in the nursery, by leaving suckers from the roots, by letting the trees grow so crooked as to become incapable of a good shape, and especially by leaving branches for two or three years, which must be cut away when the tree is planted, because they are too low, or crowd the head.

This incumbrance has wasted a great part of the sap, which would otherwise have increased the regular growth. The wounds occasioned by this lopping cannot soon be covered with new bark, and in the mean time often produce a decay. Sometimes this neglect is continued in part, when the trees are removed from the nursery, because some persons regret the loss of branches which would bear the same or the next year, and others cannot foresee the bad consequences of keeping them, which will increase with their growth and force a much worse amputation. The head of every tree should begin at least six feet from the ground; and of those whose branches are sloping, eight. When the head has been formed so low as five feet, but is well grown, it may be continued; but then its branches ought to be trimmed near the stem, and by some contrivance be enabled to rise. The head ought to have but one leader, because two seldom succeed, as the inward lateral boughs will cross each other. Its branches should be equidistant, and not more than six, nor less than four. If the tree has ample root and a strong body, the head may retain an upper tier, provided it is two feet above the first; but if not, it is best to leave only such upper branches, that have this height, and form the others from good buds. It is a bad practice to shorten the top or the branches, except a little where they are too slender for their length; by excess, it may be very difficult to produce a good leader; the branches will grow bushy, and be later in bearing, because the first fruit comes towards their ends.

Trees ought not to be kept too long in the nursery, because the small space allotted for them will not permit a regular expansion either of the root or the branches; besides, the removal, however careful, often kills them, or causes a lingering decay. An accurate inspection of the roots is necessary for taking away any rotten parts, and worms, and also for cutting off those that cross each other, or are too close. None but long ramblers ought to be shortened, and they should be spread equidis-

tant, so far as is practicable, which may be facilitated by wooden pegs. The too common fault of squeezing them into small holes, has ruined many trees: the holes must be wide enough to extend at least one foot beyond the limits of the longest roots, and the mould be made quite mellow.

The depth of the holes should not extend beyond the natural good soil; if you make a deep hole, bason-like, into the clay bottom, or unfriendly subsoil, which is too frequently done, and plant the roots therein, even filling it round with good earth will not do; for as soon as it pushes its roots beyond this, they must enter the bad and unfriendly soil, which will not fail to bring on the decay of the most healthy tree, and can never afford it suitable juices for perfecting delicious fruit; besides, the lodgment of water about the roots in this confined bason, in wet seasons, will cause the tree to become sickly, and to get overrun with moss, and full of canker.

Young apple trees planted shallow, and the holes filled up with rich native mould or earth, always succeed the best, or more completely insures the success of their living; for in shallow planting, the roots of the young trees are so near the surface as to feel the salutary influence of sun, air and rain. A great orchardist once said—"always plant shallow and give a top dressing."

A tree well pruned, planted, and secured by stakes against violent winds, will soon acquire a habit of regular growth and will be easy to keep in good order afterwards.

Pruning is an important article in the management of orchards, and therefore deserves the particular attention of the husbandman. Pruning, when judiciously done, promotes the health of the trees, brings them sooner into a bearing state, and continues them in vigor for nearly double their common age.

Should it happen that any of your trees have large heads, and but few and scanty roots, reduce their tops by a select and judicious pruning, to a due proportion with their roots; for an ox, fed only through a wren's quill, could not long exist. This will seldom happen, unless by accident, or carelessness in the taking of them up; provided they are raised at proper distances in the nursery.

No branch should ever be shortened, unless for the figure of the tree, and then constantly taken off close at the separation, by which means the wound soon heals. The more the range of the branches shoot circularly, a little inclining upwards, the more equally will the sap be distributed, and the better will the tree bear, for from that circumstance the sap is more evenly impelled to every part. Do not let the ranges of branches be too near each other, but let them be so disposed or situated around the stem, as will give to the inner parts ventilation, and admit sunshine, without much thinning.

A regular position of the branches will also, by a balance of weight, keep the tree upright, and enable the several parts to resist violent winds, and to support loads of fruit. Clusters of limbs on one side must incline the tree more and more, so as to be easily torn up by the roots, and also weaken the hold of these branches to the stem.

Indiscreet pruning of the inner parts will accumulate the fruit on the outward, and thus make the weight more powerful, as on a lever. The importance of good pruning is additional in this country, from the frequency of westerly winds, which give a contrary bias, and from the irregularity of the seasons, which in some years causes a great defect, and in others an excess of apples.

It has been before observed, that the principal pruning should be done while the trees are young, and while the limbs (to be taken off,) are small. The head of the tree should be formed while it is in the nursery, taking care to leave all the branches as nearly equidistant as possible.

When pruning is too long neglected, the limbs to be taken off become so large as to render this operation extremely prejudicial to the tree. Many persons are so stupid as to mangle regular and healthy trees, on the pretence of making them better by thinning, lopping off branches thicker than their own arms and legs, moreover, lacerating the parts, and leaving them exposed to all the injuries from heat, cold, wet and insects, and thus a certain prey to gangrene. Saving the stumps will not avail, because they convey moisture and frosts to the stem, even before they rot. In a few years large holes appear in the body of the tree, the remaining branches become sickly and produce bad fruit, and a premature death is generally certain. How often have farmers nearly ruined their orchards by hauling from them in the spring, wagon loads of the finest branches, full of bloom buds.

When by neglect irregular branches have become large, as beyond a diameter of two and an half inches, it is unsafe to cut them off, but some of their smaller boughs may be removed. If they gall others, the amputation cannot be avoided; but healing plasters and good covering should be applied to the wounds.

Whenever a branch is cut off, it is essentially necessary that it be taken off perfectly smooth and close, for it is impossible the bark can grow over a stump, because there is no power to draw it that way. In pruning, when doubts are entertained whether a certain branch should be taken off, consider whether it will be in the way three years hence; if it will, the sooner it is off, the better. When pruning is neglected, an orchard becomes of very little value, as boughs will then be suffered to hang dangling to the ground, and the heads of the trees will be so loaded with wood as to be almost impervious to the sun and air.

By a redundancy of wood the roots are exhausted unprofitably, the bearing wood is robbed of part of its sustenance, and the natural life of the tree unnecessarily shortened; whilst the superfluous wood endangers the tree by giving the winds an additional power over it, and is injurious to the bearing wood, by retaining the damps, and preventing a due circulation of air. It is common to see fruit trees, by a neglect of pruning in due time, with two or three tiers of boughs pressing so hard upon one another, with their twigs so intimately interwoven, that a small bird can scarcely creep in among them. Trees, thus neglected, acquire, from want of due ventilation, a stunted habit, and the fruit becomes of a crude inferior quality.

If pruning is commenced in the nursery, and regularly continued every spring in the orchard, by taking off small limbs as they gradually appear, by this means keeping the trees in a bearing and flourishing state, all the advantages to be derived from this operation will be fully experienced, and its disadvantages, arising from neglect and its improper application, entirely avoided.

With respect to situation, very thriving orchards are frequently found on high and low grounds, on declivities and plains, in various aspects and exposures; but this is in consequence of the natural soil being good. You should, however, avoid very damp situations, particularly such as lodge water; for in very wet soils no fruit trees will prosper, nor will the fruit produced in such places be good; but a moderately low situation, free from wet, may be more eligible than an elevated ground, as being less exposed to tempestuous winds; but, if having a gentle declivity, the more desirable. A proper soil being the grand and essential requisite, should be carefully selected; for on this depends much of your success. A good, deep sandy loam, neither too dry nor wet, is the most suitable for all kinds of fruit trees, and whether this be on high or low situations, it should be preferred to every other. Generally speaking, ground that will produce good crops of

natural grass, or kitchen garden vegetables, is suitable for an orchard; if of a loamy nature, it will be a particular advantage; any soil, however, of a good quality, not too light and dry, nor too heavy, stubborn, or wet, and not less than one spade deep of good staple, will be proper for this purpose.

You should have great regard to the distance of planting the trees, which is what few people have rightly considered; for if you plant them too close, they will be liable to blights; the air being thereby pent in amongst them, will also cause the fruit to be ill tasted; for a great quantity of damp vapours from the perspiration of the trees, and the exhalation from the earth mixed with it, will be imbibed by the fruit, and render their juices crude and unwholesome; besides, it is the opinion of some well informed naturalists and orchardists, that these vapours and perspiration of the trees collect the heat of the sun, and reflect it in streams, so as to cause what is called a fire blast; which is extremely hurtful to fruit, and most frequent where orchards are open to the south sun.

An experienced orchardist observes, that "his apple trees are planted 33 feet apart in squares, which he considers the nearest distance they should be planted." Another distinguished orchardist of Pennsylvania, "thinks that squares of forty feet is the proper distance."

In dry, sandy ground, plant trees in autumn, and in soils inclined to be moist or watery, in spring, otherwise the winter is apt to chill and kill them. In such soils it is good to open the holes in the fall, and let them remain open all winter; this enriches and mellows the land thrown out, and fits it better for planting. Where a soil is light and sandy, and not subject to inundation, plant the trees in the fall, and they will gain fibres enough to support them before winter, and will shoot well the next spring, and better than those planted in the spring. The time of planting young apple trees will be regulated by the season. In the fall they may be planted as soon as they have shed their leaves, provided there is no frost in the ground, and in the spring before the buds begin to burst.

In planting trees, should the earth be rather shallow, so that you cannot cover the roots a sufficient depth with good soil, you must have some hauled for that purpose, to where each tree is to be planted, or collected to such places from the general surface, and bank the roots around therewith; for there is no alternative, between planting them in the good soil, where their roots can take a wide extended horizontal direction, and lie within the reach of the genial influence of heat, rain, dew and air, and that of an untimely end, if planted too deep.

Tillage is favourable to the growth of young trees; whereas in grass ground their progress is comparatively slow, for want of the earth being stirred about their roots and kept loose and open.

William Coxe, of New Jersey, who has paid more attention to the raising of orchards, than perhaps any other person in our country, (he having above 3000 apple trees in cultivation,) thus remarks, "young orchards thrive in proportion to the goodness of the soil and the degree of cultivation bestowed on them. Shallow planting more completely insures the success of their living: which preserves the roots so near the surface of the earth, that by keeping the soil around them in a loose and mellow state, free from weeds, grain or grass, they may feel the salutary influence of the sun, air and rain; the last of which, in our dry climate, is particularly essential to their success for several years after planting. For this reason, all kinds of fallow crops, such as potatoes, vines, and Indian corn, particularly the last, are peculiarly adapted to the first and second year's cultivation of orchards. It is an excellent practice, if orchards are sowed in any kind of small grain or grass, to dig up the earth twice in the year around the root of the trees for

several feet, so as to make a circle of at least six feet diameter. All grain crops are injurious in proportion to their proximity to the tree, their power of exhausting the moisture from their colour, or producing a great degree of intense reflected heat. To avoid these injurious effects, dig as mentioned above three feet around, which will keep the soil loose around them, and enable the trees to resist or live in a long drought. Although this operation where extended to several thousand trees, which at present compose my orchards, necessarily is productive of much expense and trouble, I am repaid four fold in the increased vigour of my trees, and still more in their preservation from our summer drought."

There is no doubt that continually enriching and cultivating old apple orchards is injurious to the trees; but for young trees it is attended with the greatest advantages. By manuring and cultivating old orchards too often, it causes them to overbear; and by forwarding the fruit too soon, to drop before the time for gathering to keep, or for cider. Mellow mud or rich mould is the best manure which can be applied to young apple trees. If the ground is poor, stable manure is the least proper kind to be used, being, from its nature, least able to resist the destructive effects of our summer droughts, and affording a shelter to vermin equally pernicious in the winter, particularly in light soils; rich earth or river and meadow mud ameliorated by frost or putrefaction, either in its simple state, or mixed with ashes, lime or perfectly rotten dung, is of all others, after the first year, the best dressing, to be spread on the surface and ploughed in. It is an excellent practice to keep hogs in an orchard to eat all the fruit which falls while small and unripe, thereby to destroy a worm called *curculio*, contained in the fruit, which are extremely injurious to fruit and fruit trees.

When hogs are kept in an orchard, they should be fed in mornings around the roots of each tree, until you get through the whole orchard, by which means they will root about the trees, so as to keep the ground clean, loose and open, and likewise give them a considerable manuring. It is constantly observed, that when the stem of the tree grows too fast for the bark, it causes blotches and lacerations; which evil is properly avoided by scoring the bark with a sharp knife; but care should be taken not to go to the wood by cutting through the whitish rind or inner bark. A great enemy to apple trees in many parts of the country, is the caterpillar. The method of destroying them, is to go early in the morning and twist their nests out of the trees with a forked stick or long pole. It is said by a respectable farmer, that by placing a large clod of dirt in the fork of an apple tree, or by tying dirt or salt around the body of the tree, that all the caterpillars will immediately desert, and will not crawl over the dirt again to get into the tree.

But they are so easily destroyed by the former method, that it should be considered nothing but laziness in a farmer who permits his orchards to be injured by these insects. Apple trees are very often almost entirely ruined by moss, which kills many, and injures others so much, that they are only an incumbrance to the ground and a disgrace to the country. This evil may easily be checked, by scraping and rubbing off the moss in the spring of the year, with a rounded iron scraper. Draining the land, if too wet, or retentive of moisture, will sometimes prevent or cure moss; or digging round the trees on the approach of winter, or in spring, and bringing fresh mould, or the scouring of ponds, or the earth ploughed up on the site of long standing fences and laid round them. Whatever contributes to the health of the tree, will cure, or in some degree mitigate this and other diseases.

In gathering apples we must consider the climate in which we live, and direct our practice according to the degree of heat or cold. In hot countries the fruit must be gathered sooner than in colder ones,

walnuts; and the ornamental trees included the arbutus, myrtle, bay, ivy, and wild olive.

This garden contained the golden apples which Juno gave to Jupiter on the day of their nuptials. They were occupied by three celebrated nymphs, daughters of Hesperus, and guarded by a dreadful dragon which never slept. Hercules carried off the apples by stratagem, but they were afterwards returned by Minerva.

What finally became of the nymphs of the garden, or of the apples, we are as ignorant as we are of the fate of paradise, or the tree "in the midst thereof," which contained the forbidden fruit, and of which, as Lord Walpole observes, "not a slip or a sucker has been left behind."

The promised garden of Mahomet, or the heaven of his religion, is said to abound in umbrageous groves, fountains, and Houri, or black-eyed girls; and the enjoyments, which in such scenes on earth last but for a moment, are to be there prolonged for a thousand years.

Dr. Sickler is of opinion, that the gardens of Eden and Hesperides allude to, or are derived from, one original tradition. Paradise, he considers as a sort of figurative description of the finest district of Persia; and he traces various resemblances between the apples of Eve and of Juno; the dragon which never slept, and the flaming sword which turned every way. Some very learned and curious speculations on this subject are to be found in his history of fruit trees. *Geschichte der obst cultur, &c.*

With respect to the paradise of Mahomet, it is but of modern date, and may probably have been suggested by the gardens described in "Solomon's Song," and other poems: though some allege that the rural coffee-houses which abound in the suburbs of Constantinople gave the first idea to the prophet.

PERFECT PLANTS.

(From Loudon's Encyclopedia of Gardening.)

The parts of perfect plants may be distributed into conservative and reproductive, as corresponding to their respective functions in the economy of vegetation.

Conservative Organs.—The conservative organs are such as are absolutely necessary to the growth and preservation of the plant, including the root, trunk, branch, leaf, and frond.

The root is that part of the plant by which it attaches itself to the soil in which it grows, or to the substance on which it feeds, and is the principal organ of nutrition. This definition is no doubt liable to exceptions. For even of plants denominated perfect, some are found to float on the surface of the water, having their roots immersed on it, but not fixed; such as the several species of lemma or duck meat; and of plants denominated imperfect, some have no root at all, or, at least, no visible part distinct from the rest to which that appellation can be ascribed; such as many of the confervæ; or they are apparently altogether root, such as the tuber cibarium or truffle. The viscum or mistletoe roots into the bark of trees. At the point of union between the root and upper part of the plant, there may generally be perceived a sort of annual bulge or protuberance surrounding or encircling it. It is most discernible in the early stages of the plant's growth, and is then particularly conspicuous in the horse-chestnut. French botanists call it *le collet*, the collar. Roots have been found to exhibit a considerable variety of shape, size, and structure, analogous to the peculiarities affecting the general habit of the plant.

The trunk is that part of the plant which springing immediately from the root, ascends in a vertical position above the surface of the soil, and constitutes the principal bulk of the individual. It has been represented by Linæus as being the cau-

dex ascendens, or root above ground; an illustration perhaps more fanciful than philosophical.

The branches are the divisions of the trunk, originating generally in the upper extremity, but often also along the sides. The primary divisions are again subdivided into secondary divisions, and these again into still smaller divisions, till they terminate at last in slender twigs. In point of external form and structure the branches resemble the trunk; but in point of insertion, distribution, and direction, they exhibit some considerable variety, furnishing a ground of distinction, occasionally resorted to by botanists in the discriminating and characterising of species.

The leaf, which is a temporary part of the plant, is a thin and flat substance of a green colour, issuing generally from numerous points towards the extremities of the branches, but sometimes also immediately from the stem or root, and distinguishable by the sight or touch into an upper and under surface, a base and an apex, with a midrib and lateral nerves. But to this definition there are no doubt a good many exceptions. For leaves are not always thin and flat, nor are they always green. The leaves of the aloe and common house-leek are thick and fleshy; the leaves of the beet are of a dark and dull purple; and the leaves of Canary reed-grass are variegated with stripes of green and white. Nor are all leaves furnished with a midrib and lateral divisions; for in the grasses the nerves are parallel.

The frond, which is to be regarded as a compound of several of the parts already described, consists of an union or incorporation of the leaf, leaf-stalk, and branch or stem, forming as it were but one organ, of which the constituent parts do not separate spontaneously from one another by means of the fracture of any natural joint, as in the case of plants in general, but adhere together even in their decay. Like the stipe, it is peculiar only to palms, at least as applicable to perfect plants, and is sometimes pinnate, as in *zamia integrifolia*; sometimes doubly pinnate, and sometimes fan-shaped and plaited, as in *chamærops humilis* and *raphis flabelliformis*.

METHOD OF CLEARING TREES FROM WORMS, CATERPILLARS, &c.

The following method of driving worms, caterpillars, and all other sorts of insects, from trees, has lately been practised with singular success: Bore a hole into the trunk of the tree, as far as the heart; fill this hole with sulphur, and place in it a well-fitted plug; a tree of from four to eight inches diameter, requires a hole large enough to admit the little finger, and in the same proportion, for larger or smaller trees. This will usually drive the insects away in forty-eight hours, but uniformly succeeds, perhaps sometimes after a longer period.

[Silliman's Journal.]

LADIES' DEPARTMENT.

A MOTHER TO HER DAUGHTER, ON MARRIAGE.

You are now my beloved child, about to leave those arms which have hitherto cherished you, and directed your every step, and at length conducted you to a safe, happy, and honourable protection, in the very bosom of love and honour. You must now be no longer the flighty, inconsiderate, haughty, passionate girl, but ever, with reverence and delight, have the merit of your husband in view.—Reflect how vast the sum of your obligation to the man who confers upon you independence, distinction, and, above all, felicity. Moderate, then, my beloved child, your private expenses, and proportion your general expenditure to the standard of his fortune, or rather his wishes. I fear not that, with your education and principles, you can ever forget the more sacred duties, so soon to be your

sphere of action. Remember the solemnity of your vows, the dignity of your character, the sanctity of your condition. You are amenable to society for your example, to your husband for his honour and happiness, and to heaven itself for those rich talents intrusted to your care and your improvement; and though, in the maze of pleasure, or the whirl of passion, the duties of the heart may be forgotten, remember, my darling child, there is a record which will one day appear in terrible evidence against us for our least omission.

A WIFE.

When a man of sense comes to marry it is a companion whom he wants, not an artist.—It is not merely a creature who can paint and play, sing and dance; it is a being who can comfort and counsel him, one who can reason and reflect, and feel and judge, and discourse and discriminate; one who can assist him in his affairs, lighten his sorrows, purify his joys, strengthen his principles, and educate his children. Such is the woman who is fit for a mother, and the mistress of a family. A woman of the former description may occasionally figure in the drawing room, and attract the admiration of the company, but she is entirely unfit for a helpmate to a man, and to "train up a child in the way he should go."

[Port Folio.]

ELEGY

To the Memory of a Beautiful Young Lady.

"Nimium ne crede colori
"Alba ligustra cadunt, Vaccinia nigra leguntur."
VINO.

No more of Love's enchanting joys I sing,
No more my mind on Fancy's pinion flies,
But to that dreary dwelling stoops her wing,
Where, in Death's icy arms, Cleora lies.

Attend the lay, ye gay and beauteous train
Who careless flout where late Cleora shone,
Read in her early fate such charms how vain,
Nor joy to call the fading gifts your own.

Fond was the care with which her youth was rear'd,
Joyful her parents saw their blossom blow,
Each day some virtue, or some grace appear'd,
Ah! little thought they of the coming wo.

With pride they show'd th' admiring world their child,
Whose faultless mind might awe detraction's
In whose bright eye resistless sweetness smil'd,
But, ah! what smile can soothe the tyrant Death?

Cleora's cheek the rosy tincture leaves,
Her swimming eye the lively lustre flies;
With keenest pangs her gentle bosom heaves,
Heav'n claims its own, the beauteous suff'rer dies.

Ah! what avails it, sister beauties, say,
To shine the fairest of the youthful throng,
To win the brave, the witty, and the gay,
Touch the soft string, or pour the melting song?

Will charms like these avert the stroke of Death,
Assuage his pangs, or chase his loathsome gloom?
Will they one hour survive your parting breath,
Or cheer the dreary mansions of the tomb?

Ah, No!—'tis virtue, innocence, and truth,
That draw the tear sincere from Pity's eye,
Strike the cold heart of age, warn thoughtless youth,
And call from friendship's breast the bursting sigh.

For such, Cleora's sorrowing sister weeps,
A mother's bleeding bosom knows no rest,
A lover, by her grave sad vigils keeps,
And clasps the marble to his aching breast.

Attend, AMANDA, to my mournful Muse,
Oft have her gayer hours thy praises sung,
Nor to Cleora's bier a sigh refuse,
Tears from the coldest hearts her fate has wrung.

And while we mark where that once envied form
In the cold earth is lodg'd, to worms a prey,
Hark! a faint voice along the midnight storm
Comes from her narrow house, and seems to say,
"In beauty's earliest bloom, by Death o'erthrown,
"Life's fairy, flatt'ring prospect full in view,
"Youth's blossom wither'd ere the flow'r was blown,
"Sudden I bade the world's vain joys adieu!
"Ah! trust to one whom Heav'n itself has taught,
"Vain, vain is beauty, and its fading joy;
"And vainer they, who by its witchcraft caught,
"Fix their fond fancy on the worthless toy.
"Behold you' nymph in conscious charms so vain,
"Who smiles alike on all the flatt'ring throng,
"The praise of fools is all she strives to gain,
"For this she leads the dance, and strains the song.
"Tis not the smile serene of wit and sense
"That in her studied glance and dimple dwells,
"But the loud laugh at decency's expense,
"Without a cause her giddy bosom swells.
"The sigh sincere of faithful love she slights,
"No spark of gen'rous friendship fires her breast,
"There levity each finer feeling blights,
"And bids her live—unblessing, and unblest.
"But Folly's gaudy Summer soon shall end,
"Time's wintry blast her fruitless flow'rs shall
shed;
"Nor shall she find a lover or a friend
"To court her living, or to weep her dead.
"While the soft maid within whose bosom lives
"The soul of friendship, and of love sincere,
"Shall prove those joys which only virtue gives,
"And taste that bliss for which Heav'n form'd her
here.
"The tender friend whose woes she kindly mourn'd,
"Shall weep her loss, when life's gay scenes are
flown,
"The manly breast, whose love she fondly return'd,
"Shall heave those sighs to passion due alone.
"And when with me a dwelling she shall have,
"On each sad heart she leaves, with grief oppress'd,
"Fond mem'ry shall her epitaph engrave,
"And fix her name in every virtuous breast."

SPORTING OLIO.



(From the Petersburg Intelligencer.)

ANNALS OF THE TURF—No. VIII.

The Origin and Progressive Improvement of the Race Horse.

It cannot but be an interesting task to inquire into the origin of the turf horse, and to ascertain the means by which he has been brought to his present high state of perfection. The English system maintains the theory, that the horse genus is supposed to have consisted originally of two main divisions or species: the smooth-haired, flat, and fine boned courser, and the rough-haired, coarse, and heavy-bodied steed, adapted for labour and draught. The former was the ancestor of the Arabian, Barb, and Turkish horses, and the latter of the English heavy horse. The Arabian, Barb, and Turkish horses are generally smaller than the English heavy horse, but they are more powerful and more enduring. They are also more intelligent and more docile. The English heavy horse is generally larger and more powerful than the Arabian, Barb, and Turkish horses, but they are less intelligent and less docile. The English heavy horse is also more adapted for labour and draught than the Arabian, Barb, and Turkish horses. The Arabian, Barb, and Turkish horses are generally more intelligent and more docile than the English heavy horse, but they are less adapted for labour and draught. The English heavy horse is generally more powerful and more enduring than the Arabian, Barb, and Turkish horses, but they are less intelligent and less docile. The English heavy horse is also more adapted for labour and draught than the Arabian, Barb, and Turkish horses. The Arabian, Barb, and Turkish horses are generally more intelligent and more docile than the English heavy horse, but they are less adapted for labour and draught. The English heavy horse is generally more powerful and more enduring than the Arabian, Barb, and Turkish horses, but they are less intelligent and less docile. The English heavy horse is also more adapted for labour and draught than the Arabian, Barb, and Turkish horses.

in rich and succulent food. The fine skinned, with elegant symmetry, dry and solid bones, large tendons, and the highest degree of muscular energy, in fact, bearing the general characteristics of the blood horse, are bred under warm and southern skies, upon a dry soil, on the hills of the desert. The hypothesis is entertained, that Arabia is the native or breeding country of the Courser, and that part of Europe, formerly denominated the Netherlands, or Low Countries, the original soil of the large draught horse. Other writers, however, contend, that all horses are derived from the same single primitive species, and that varieties are purely accidental, and the effects of varying soil and climate. This opinion, however specious, is not sanctioned by facts and experience; in allowing full force to the arguments derived from the effect of soil and climate, yet it is equally true there are certain landmarks and boundaries of specific character, in both the animal and vegetable creation, which nature will never permit to be passed.

No length of time or naturalization upon the marshy soil of Belgium, it may safely be pronounced, would be sufficient to transform the high bred, silken and bounding Courser of Arabia, into the coarse, bluff and fixed horse of the former country; nor would the sojournment of the latter, during any number of ages, in the south, have the effect of endowing him with these peculiar properties of body, which distinguish the aboriginal southern horse. The interchange just supposed, would no doubt have the effect of increasing the bulk of the courser, and reducing that of the draft horse; but the natural characteristics of each, would remain unassailable by any other medium than that of intercopulation, through which we know from experience they may be merged, and in effect annihilated.

Arabia Deserta is allowed to be the breeding country of the purest and highest bred racers—that is to say, possessed in the highest degree of those qualities which distinguish the species; and these are sleekness and flexibility of the skin, and general symmetry, from the head to the lower extremities. The eye full and shining, the head joined, not abruptly, but to a curved extremity of the neck; the shoulders capacious, deep or counter, and declining considerably into the waist; the quarters deep, and the fore arms and thighs long, large and muscular, with a considerable curve of the latter; the legs flat and clean, with the tendon or sinew large and distinct; the pasterns moderately long, the feet somewhat deep, the substance of the hoof fine, like that of the deer; in size not large, seldom exceeding or reaching the height of fifteen hands.

It is in the mountainous country, among the Bedouin Arabs, that the blood and characteristic properties of this species of the horse has been preserved pure and uncontaminated by any alien mixture or cross, as they pretend, for more than two thousand years.

It is well known, that the English race horse was originally bred from the Arabian, Barb, and Turkish stocks, and contains in his veins nearly an equal admixture of the blood of each. The Barbary horses were generally smaller than the Arabians, but carried more depth of carcass. Their most prominent points are, ears handsome and well placed; forehead fine and long, and rising boldly out of the withers; mane and tail thinly haired, with lean small head; withers fine and high, loins short and straight, flanks and ribs round and full, with good sized barrel; tail placed high; haunches strong and elastic; thighs well turned; legs clean; sinews detached from the shank; pastern too long and thin; good and sound; of all colours, but bay and chestnut are the most common. They are bred upon a dry soil, and sprung from the desert like the Arabian, which they are generally deemed to resemble in their appearance and disposition.

horses resemble the former, and are said to be very sure-footed; generally cold tempered and slow, requiring to be roused and animated, on which they will discover great vigour, wind and speed, being in their gallop great striders.

The Turkish horses resembled the Barbs, and were said to be handsome, elegantly formed, full of spirit, possessing fine hair, soft skins, good speed, but more particularly remarkable for their unfailing wind, enabling them to undergo much labour and fatigue.

It is a curious physical question, that the Arabian, Barb, and Turkish horses, should, only in particular individuals, have proved valuable foal getters, and that these properties should be denied to the generality of them, and that the whole of them should so soon be laid aside. Out of the vast number of those foreign horses imported into England in early times, but very few of them established their characters as the propagators of high formed racers; and it may be assumed as a fact, that for more than half a century past, not a solitary Arabian, Barb, or Turkish stallion has been used in England; or if used at all, were found to be utterly worthless.

England soon discovered that from her fine climate and soil, she had obtained in size form and speed, every quality which the best models of the original foreign breeding countries could afford to her; it is true she had to resort to the Arabians and Barbs for a foundation; but as soon as the stock arising from them had been sufficiently acclimated and diffused through the country, she found it safest to rely upon them for all those qualities which they themselves had acquired from their foreign progenitors.

The early English breeders found the Arabian stock to constitute an excellent cross upon the Barb and Turk, as from the Arabian blood was acquired speed, stoutness and stride from the Barb, length and height from the Turks.

But of all the foreign stallions imported into England in early times, the fame of the two great Arabians, the Darley and Godolphin, has swallowed up that of all the rest; and the best English horses for nearly a century past, have been either deeply imbued with their blood, or entirely derived from it. They have produced stock of vast size, bone and substance, and at the same time endowed with such extraordinary and before unheard of powers of speed and continuance, as to render it probable that individuals of them have reached nature's ultimate point of perfection. The descendants of these Arabians have rendered the English courser superior to all others, not only in the race, where indeed he has long excelled, but as breeding stock.

To such of my readers as are unacquainted with the history of that justly celebrated horse, the Godolphin Arabian, the following particulars of him may not be unacceptable. He was in colour a brown bay, somewhat mottled on the buttocks and crest, but with no white excepting the off heel behind; about fifteen hands high, with good bone and substance. The same of the Godolphin Arabian was greatly increased by the famous picture which was taken of him by the immortal Stubbs, and which sold at his sale for 246 guineas. This portrait of the Godolphin is doubtless an admirable piece; it represents his crest as exceedingly large swelling, and elevated, his neck elegantly curved at the setting on of the head, and his muzzle very fine. He had considerable length; his capacious shoulders were in the true declining position; and of every part materially contributory to action, nature had allowed him an ample measure added to this, there is in his whole appearance, the expressive image of a wild animal, such as we may suppose the horse of the desert. Certainly the horse war with his master and his master's horse.

figure before me, I cannot help wondering, that it should not occur to his noble proprietor, a true sportsman as he was, that the Arabian might be worthy of a trial as a stallion. This horse was imported by Mr. Coke into England, and it was strongly suspected that he was stolen, as no pedigree was obtained with him, or the least item given, as to the country where he was bred; the only notice given, was, that he was foaled in 1724. Mr. Coke gave him to Mr. Williams, keeper of the St. James' coffee house, who presented him to the Earl of Godolphin. In this noble Lord's stud he was kept as a teaser to Hobgoblin, during the years 1730 and 1731, when, that stallion refusing to cover Roxana, she was covered by the Arabian, the produce of which was Lath, not only a very elegant and beautiful horse, but, in the general opinion, the best which had appeared on the turf since Flying Childers. The Arabian served for the remainder of his life in the same stud, producing a yearly succession of prodigies of the species. He died in 1753, in his 29th year, and was decently buried, and cakes and ale were given at the funeral of his flesh. The following famous horses, some of which were of great size and powers, beside many others, with a great number of capital racing and brood mares, descended from the Godolphin Arabian, viz: Lath, Cade, Regulus, Babram, Blank, Dismal, Bajazet, Tamerlane, Tarquin, Phoenix, Slug, Blossom, Dormouse, Skewball, Sultan, Old England, Noble, the Gower Stallion, Godolphin Colt, Cripple, Entrance.

Mr. Darley, of a sporting family in Yorkshire, being a mercantile agent in the Levant, and belonging to a hunting club at Aleppo, made interest to purchase a horse, one of the most valuable ever imported into England, and which fully established the worth of the Arabian stock. He was a bay horse, his near foot before, with his two hind feet white, with a blaze in his face, and about fifteen hands high; he was imported into England in the year 1703, then four years of age.

The Darley Arabian. (for such he was called,) got Flying Childers. Bartlett's Childers, Almanzor, Whitelegs, Cupid, Brisk, Dædalus, Skipjack, Manica, Aleppo, Bully Rock, Whistlejacket, Dart, &c. This horse had not that variety of mares which annually poured in upon the Godolphin Arabian; indeed he covered very few except those of Mr. Darley, his proprietor—but from those sprung the largest and the speediest race horses which were ever known. Flying Childers and Eclipse, the swiftest, beyond a doubt, of all quadrupeds, were the son and great-grand son of this Arabian, from which also, through Childers and Blaze, descended Sampson, the strongest horse that ever raced before or since his time; and from Sampson was descended Bay Malton, who ran, at York, four miles in 7 minutes 43½ seconds, being 7¼ seconds less than it was ever done before over the same course.

AN ADVOCATE FOR THE TURF.
(To be continued.)

DISEASES OF DOGS.

INFLAMMATION.

Inflammation arises from various causes; but is distinguished by the part affected becoming swollen, dry, and hot. A slight degree of inflammation will generally subside without the aid either of medicine or external application. Bleeding in the neck will frequently remove an inflammation; or the application of leeches to the affected part, having previously shaved the hair off. If the swelling or tumour becomes larger, soft, and shining, matter is forming, when warm poultices should be applied as described under *contused wounds*, and the same treatment adopted. When the matter is completely formed, (which may be known by the fluctuation of the fluid upon a slight pressure,) if the skin is very thin, a deep opening or incision should be made

with a lancet on the prominent part; but if hardness is felt, the tumour must remain till it breaks itself. After the tumour is emptied, care should be taken that the air does not penetrate, or the wound will be much more difficult to heal.

When a dog's eyes become inflamed and assume a red and fiery appearance, bleeding will generally relieve him.

Dogs, however, are not very subject to inflammation; and, generally speaking, will be troubled with few diseases if properly dieted and exercised. Dogs kept in towns are much more subject to disorders, than such as are kept in the country. Confinement is always injurious to dogs.

WHEN WOUNDED WITH SHOT.

Extract the shot if possible, and rub with a little mercurial ointment. At all events, use the mercurial ointment.

SORE FEET.

Styptic tincture; or, if this cannot be procured, salt and water.*

MISCELLANEOUS.

ON MANUFACTURING INDIGO.

(From the New York Statesman.)

Indigo, its characters are these—The flower is of the butterfly kind; the standard open, bordered and reflexed; the wings are oblong, blunt, and spread open; as is also the keel, which turns backward; in the centre is situated a cylindrical germen, which becomes a taper pod, filled with kidney shaped seeds.

The species commonly cultivated for use is the Guatimala indigo, with smooth arched pods, growing close to the branches, unequal winged leaves, whose lobes are blunt and oval.

From this plant is extracted a dyer's drug of a deep blue colour. The particular account of the culture of the plant, and the preparation of the indigo, is as follows:—The ground being thoroughly cleared from weeds, a number of slaves, ranged in a line, march across, making little trenches of the width of their hoes, and two or three inches deep, about a foot distance from one another every way; then returning they drop some seed in every trench, and afterwards cover them with the earth taken out. In moist weather the plants come up in three or four days, and in about two months after, they are fit for cutting; if suffered to stand till they run into flower, the leaves become too dry and hard, and the indigo obtained from them proves less in quantity and less beautiful—the due point of maturity is known by the leaves beginning to grow less supple, or more brittle.

In rainy seasons, the cutting may be repeated every six weeks—cutting in dry weather kills the plants, which if that is avoided, continue to afford fresh crops for two years.

When the plant is gathered, a large quantity is put into a vat, with so much water as is sufficient to cover it, and some wood laid above to prevent its rising above the water. The mass begins to ferment, sooner or later, according to the warmth of the weather, and the maturity of the plant—sometimes in six or eight hours, and sometimes in not less than twenty. The liquor grows hot, throws up a plentiful froth, thickens by degrees, and acquires a blue colour inclining to a violet—at this time,

* It will be necessary here to observe, that what is recommended above is generally for sore feet; but the matter requires elucidation: In the heat of summer, when after a hard day's shooting the dog is foot-sore, his feet should be well washed with soap and water, for which warm water is, perhaps, preferable to cold: if the skin is rubbed off, or the foot lacerated, styptic tincture or salt and water should be applied.

without touching the herb, the liquor impregnated with its tincture is let out, by cocks in the bottom, into another vat placed for that purpose, so as to be commanded by the first.

In the second vat, the liquor is strongly and incessantly beat and agitated, with a kind of buckets fixed to poles, till the colouring matter is united into a body, or becomes granulated. A good deal of nicety is requisite in hitting this point; if the beating ceases too soon, a part of the tincture matter remains dissolved in the liquor, if continued a little too long, a part of that which separated is dissolved afresh. The exact time for discontinuing the process is determined by taking up some of the liquor occasionally in a little white cup, and observing whether the blue *seculæ* is disposed to separate and subside.

The whole being now suffered to rest till the blue matter has settled, the clear water let off by cocks in the sides at different heights, and the blue part discharged by a cock in the bottom into another vat. Here it is suffered to settle for some time longer; then further drained in cloth bags, and after the water is drained off is exposed in shallow wooden boxes to the air, sheltered from the sun, and carefully kept from the rain, till thoroughly dry.

It is further to be observed that the goodness of the indigo depends greatly on the age of the plant—that before it has grown fully ripe, the quantity it yields is less, but the colour proportionably more beautiful: that probably the secret of those whose indigo has been most esteemed, is no other than cutting the plant at the time when it yields the finest colour; and it is recommended to the more curious only to use the leaves.

It appears from the processes I have given that the makers of indigo differ in the time of gathering the plant. Mr. Dalrymple directs it to be cut when "in full flower," and the last account says, "if they are suffered to stand till they run into flower, the leaves become too dry and hard, and the indigo obtained from them proves less in quantity and less beautiful."

The British government during the late continental war, by attempting to deprive France of indigo, caused them to obtain a supply from the woad plant. Soon as peace was obtained, this manufacture was resigned by them as too tedious and expensive. Lately such improvement has been made in the process, by Mr. Morina, an Italian, by which so much larger a quantity is obtained, and of such superior quality, as to make it probable that Europe in a few years, will be able to supply indigo sufficient for her own consumption, at as low a rate as it can be supplied from the East Indies, or from South America. The principal improvement made by Mr. Morina, consists in the time of gathering the plant. Instead of leaving the leaves to become fully ripe before gathering, as was the former practice he has them gathered in a full green state. If this makes so great a difference in the quantity and quality of the tincture matter obtained from the woad plant, a similar effect must result from the state in which the indigo plant is gathered, and the manufacturer cannot devote his time to better advantage than to the ascertaining the exact period when the plant affords the largest portion of fine indigo.

Sufficient directions have been given in the former essays on the appearances which indicate a due degree of fermentation; but as the amount and beauty of the product must depend, in a considerable degree, on the vigour with which the fermentation is brought on, I shall venture an opinion on this point. In working the blue vat the body and beauty of the colour is ever in the ratio of the strength of the fermentation. When the fermentation is weak, the colour also is weak and dull. The vigour with which the fermentation progresses will depend, every thing else the same, on the temperature of the liquor. The experience of centuries has proven, that the best temperature for promoting the ferment-

tation of the woad vat is from 125° to 130° Fah. It does not necessarily follow that the same degree would be best for the indigo plant, but the foregoing facts prove, that the more vigorous the fermentation is, the more beautiful and more abundant will be the product, and that some given temperature will produce the most vigorous fermentation.

It will be useless to say any thing more on the degree of oxidizement necessary for the colouring *seculæ*; but as this part of the workmanship has been found highly injurious to the health of the slaves working at it, I shall offer a plan of avoiding its deleterious effect. The present mode is to beat it, or dip the liquor from the back with buckets on the end of poles, and letting it run out again, in the most efficient way by which it can be exposed to the action of the atmosphere. This is done to enable its tincture matter to absorb oxygen. So great is the absorption of vital air during this process that a candle will not burn near the surface of the liquor, and this deoxidized atmosphere being breathed by the slaves, produces disease and death. General Wade Hampton informed me by letter, some years since, that he had declined the manufacture of indigo principally on this account. If an inclined wheel were placed twenty or thirty feet from the back, having an horizontal shaft working from it which should run across and over the back, to which were attached a machine for lifting the liquor, after the manner of the elevator in grain mills, the whole might be set in motion by the slaves working on the inclined wheel, or by horses or bogs being placed on it. Some such plan as this would take the workmen beyond the reach of the deleterious atmosphere, and thereby remove one of the greatest objections to the introduction into this country of the manufacture of indigo.

To succeed in introducing American made indigo, it will be necessary to put it in the hands of some person for sale, who is acquainted with the consumable value of the article. It is now thrown into the market at random, and is often bought and sold by those who know nothing of its intrinsic value, nor by what means its strength may be developed by the manufacturer, or dyer. The prejudice against strong heavy Guatimalas was nearly as great two years since among our consumers, as it is now against that made in the Mississippi and Carolina. This prejudice has been partially removed by the writer of this article, and many of our dyers are now able to appreciate the value of the strong Guatimalas. Different qualities of indigo require different processes to prepare them for dyeing. The strongest indigo I ever used in England was made in South Carolina, and I have no doubt, should some of our southern planters turn their attention seriously to the manufacturing of indigo that it might be brought into use, and its intrinsic value properly appreciated.

HOPSON.

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 4, 1826.

TO THE EDITOR OF THE AMERICAN FARMER.

Dear Sir,—I perceived at the last meeting of our Society, that you were chagrined, and justly so, at the apathy, if not the absolute defection of many of our hitherto most prominent and useful members. This, it is true, was manifested, not so much in withdrawing themselves from the public view, as in withholding the important aid which they might have afforded by contributing to the Exhibition of stock. It is well known that the immediate vicinity of Baltimore, or at all events the circumjacent ten miles square, could readily have afforded a sufficient number of choice cattle to have filled the pens, and filled them, too, with credit to the proprietors:

yet I believe there were not more than a dozen derived from that source. In making this allusion, however, to a particular neighbourhood, I beg not to be understood as attaching a greater degree of censure to it, than falls to the share of all that portion of the agricultural community who profess an interest in its general prosperity, and a conviction of the importance of our Society to the attainment of that object. Now I am not disposed to think that there is any real abatement of interest in the community upon this all important and vital subject, but rather attribute the falling off at our last Show, to the general principle inherent in all human affairs, which tends to a state of rest, if not to a retrograde movement, whenever the stimulus or propelling power is removed or ceases to operate. And as in our association, you are certainly the *primum mobile*, I very much fear, unless you give us now and then a fresh impulse, that we shall yield to this sluggish propensity of our nature.

The great point of difficulty, however, is the mode of applying this force. Neither coaxing nor scolding will answer, it is clear; for you have resorted to both in vain, accompanying the former with all the arts of persuasion, and the latter with the severity of just reproach. What, then, is to be done? In meditating upon this subject, a scheme has suggested itself to my mind, which I cannot help believing will be successful, if carried into operation. It is this: suppose that a compact was formed amongst the members of this Society, by which each signer of the instrument should bind himself to exhibit at least one *quadruped* besides the *biped*, which is exhibited as a matter of course. But jesting apart, suppose you were to draw up, and endeavour at all seasonable opportunities to procure subscribers to such an agreement as the following:

We, the undersigned, deeply impressed with the importance, and sincerely desirous of promoting the prosperity of the Maryland Agricultural Society, mutually pledge ourselves to produce at the next Exhibition one or more objects, each, to compete for the premiums then offered. A FARMER.

AGRICULTURAL SOCIETY.

MR. SKINNER, *Edisto Island, S. C. July 17, 1826.*

Dear Sir,—The third anniversary meeting of the AGRICULTURAL SOCIETY OF ST. JOHN'S, COLLETON, was held at this place on Wednesday, the 11th inst. After the ordinary business of the day, a highly interesting and appropriate address, replete with sound practical information, was delivered by Edward Whaley, Esq., a copy of which was requested for publication.

The following gentlemen were elected officers of the Society for the ensuing year, viz:

WILLIAM SEABROOK, SEN., *President.*
JOHN R. MATHEWES, *Vice President.*
WHITEMARSH B. SEABROOK, *Cor. Secretary.*
DR. EDWARD MITCHELL, *Rec. Secretary.*
EDWARD WHALEY, }
WM. SEABROOK, JUN., } *Committee of In-*
CATO A. BECKETT, } *spection.*
EPHRAIM M. BAYNARD, }
COL. JOSEPH WHALEY, }

Very respectfully, your obed't serv't,
WHITEMARSH B. SEABROOK,
Cor. Sec. of Ag. Soc. St. John's, Colleton.

CONTENTS OF THIS NUMBER.

On Smut in Wheat—On Liming Seed Wheat—Essay on the management of Orchards—On Turnips—Analysis of Marls—On the Fabulous Gardens of Antiquity—Perfect Plants—Method of cleaning Trees from worms, caterpillars, &c—A Mother to her Daughter on Marriage—A Wife—Elegy to the Memory of a beautiful young Lady—Annals of the Turf, No. VIII.—Diseases of Dogs, Inflammation, Shot Wounds, Sore Feet—On the Manufacture of Indigo—Letter to the Editor—Agricultural Society of St. John's, Colleton.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	7 50	8		
BACON, and Hams, . .	lb.	5	9	9	12
BEES-WAX, Am. yellow	—	31	33		50
COFFEE, Java,	—	17		22	25
Havana,	—	15	16		20
COTTON, Louisiana, &c.	—	13	14		
Georgia Upland, . . .	—	11			
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	14	16	18
Dipt,	—	11			14
CHEESE,	—	9	11	12	15
FEATHERS, Live, . . .	—	30		37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	7 00			
FLAXSEED, Rough, . .	bush	80			
FLOUR, Superfine, city,	bbl.	4 37½	4 50	6 00	
Fine,	—	4 00			
Susquehanna, superfi.	—	4 00	4 12½		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	73			
white	—	78			
Wheat, Family Flour,	—	78	80		
do. Lawler, & Red, new	—	90	95		
do. Red, Susque. . .	—	80	83		
Rye,	—	65	70		
Barley,	—	80			
Clover Seed, Red . . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	2 25		3 00	
Oats,	—	53	55		
Beans, White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	15		25	
HOGS' LARD,	—	7	9	12	
LEAD, Pig	lb.	6½			
Bar	—	8	8½		
LEATHER, Soal, best,	—	22	23		
MOLASSES, sugar-house	gal.	46		62½	15
Havana, 1st qual. . .	—	32	34	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27		40	
Spermaceti, winter . .	—	70		88	
PORK, Baltimore Mess,	bbl	11 00	12 00		
do. Prime,	—	8 00	9 00		
PLASTER, cargo price,	ton.	3 87½	4 00		
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	7½	8	12
WHISKEY, 1st proof, .	gal.	31	32½	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	38		50	
SUGARS, Havana White,	c. lb.	12 50	13	15	16
do. Brown,	—	8 50	9 00		
Louisiana,	—	7 50	9 50	10	11
Loaf,	lb.	19	22	20	23
SPICES, Cloves,	—	70	75	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper,	—	17		25	
SALT, St. Ubes,	bush	43		75	
Liverpool ground . .	—	45		75	
SHOT, Balt. all sizes, .	cwt.	9 00			
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 15	1 20	2 00	
Lisbon,	—	1 15	1 20	1 50	1 75
Claret,	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30		35	
do. crossed,	—	20		25	
Common, Country, . .	—	15		20	
Skinnors' or Pulled, .	—	20		25	

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AGRICULTURE.

ON SMUT IN WHEAT.

(From the Memoirs of the Philadelphia Agricultural Society.)

Remarks on an article in the last number of the American Farmer, by Wm Young—with additional Observations on Smut, and the means of preventing it.

By JAMES MEASE, M. D.

From the first fact mentioned by Mr. Young, viz. that the smutty wheat he raised, was part of a kind which had been sown for several years upon the same ground, an apparent confirmation may seem to be given to the commonly received opinion, of the necessity of a change of seed in order to prevent disease and degeneracy; but the experience of the accurate Mr. Cooper, of New Jersey, and other facts on this subject, will not permit its adoption. That industrious improver has found, that the seeds of his vegetable productions improve, instead of degenerating, although sown upon the same ground for various periods, viz. 20, 30, 45 years. His account being before the public, need not be dwelt on at this time. Mr. Bakewell, the celebrated improver of the breed of cattle in England, disproved the position of the necessity of crossing breeds merely for the sake of a cross, and hence constantly bred in and in, from his own excellent stock, until he found one with peculiar qualities which he wished to add to those of his own stock.

The cause of smut in Mr. Young's wheat must still be sought for, but what that cause is, may not be easily ascertained. The disease has prevailed to a great degree within a few years in Britain, and has been frequently investigated by the philosophical and practical agriculturists of that country, and to their remarks I shall be indebted for what I now have to offer on the subject.

Mr. Wimpey,* is of opinion that smut is almost entirely occasioned by some vitiating principle in the air, a constant concomitant of wet, stormy weather. His experiments agree with those of Mr. Young in shewing, that grain which is vitiated by smut, infallibly causes the produce from it to be smutty: he also proves that the cleanest grains frequently produce smutty crops, notwithstanding change of seed, steeping, and liming, and adds a fact not noticed by Mr. Young, viz. that sound seed taken from smutty ears, produces as clean crops as seed from grains that were perfectly free from smut.

Mr. Somerville† thinks that smut is occasioned by a very small insect not visible to the naked eye, in the downy part of the grain. He ascertained the truth of this opinion, by observing some smutty balls perforated in many places with small round holes, and by holding them near a candle, he discovered the insects, resembling wood lice in shape. The heat from the concentrated rays of the sun thrown upon the balls with a burning glass, also put them in motion, and shewed them in every different point of view. He supposes that when the balls are broken in the operation of threshing, or come in contact with clean healthy grain, the insects leave the smutted grains, and adhering to such as are healthy, are sown with them, and wound the tender stem in such a manner as to render the plant incapable of producing any thing but smut. Another practical writer‡ also ascribes the disease to an insect, which lays its eggs in the downy parts or beard of the grain, and by wounding the ear in several places, checks its growth.

The late Sir John Call,§ entertained the same opinion as to the cause of smut, but he adduces no

experiments to support it. He adds, however, a fact, which is contrary to the experience of Mr. Wimpey, Mr. Young, Mr. Somerville, and others whose observations have been published: it is, that the black dust of the smutty grains, has no effect upon the growth of sound grains though rubbed and mixed therewith. The Rector of the parish, and two farmers, have certified to the correctness of his statement. Giving full credit to the fact, we can only say, that being so contrary to general observation, prudence requires that we do not follow a practice attended by mischief in all cases except one.

Baron Munkhausen, of Hanover,* also says, that after a strict examination of the black powder smut with a microscope, he found it to consist of small transparent globules, with black specks in the middle of each: that these globules are the eggs of extremely minute insects; from these eggs, when they are placed in water of a certain degree of warmth, there proceeds an animalculæ of an egg-shaped form. When the wheat is threshed, these eggs stick to the tops of the sound grains, which being sown, continue the evil.

Mr. Caleb Kirk, who lives near Mr. Young, sent me a specimen with the smut attached to the grains, in consequence of the diseased sheafs having been threshed among the sound, in which order it came to his mill to be ground. He first passed it through the barley mill,† and thereby removed the smut, (which chiefly adheres to the downy substance at the upper end of the grain,) and then found that it produced excellent flour; whereas when ground without this operation, a flour was produced of a dark colour, which, though it rose well, yet spread out when baked, into the form of a cake, and became compact; and when cold, was dry and crumbly, and so hard, that a knife entered with difficulty; it was, moreover, without the agreeable taste of bread. Four bushels of infected grain yielded half a bushel of smut!

From a paper in a French periodical work on domestic and rural economy,‡ it appears that by washing and drying, smutty grain may be rendered fit for mill, and for making wholesome bread; but to do this properly, the wheat must be stirred with a broom, and rubbed with the hands, in small quantities at a time; the foul water must be let out of the cistern, and fresh water put upon the wheat, until it runs off clear. If it is washed at a river or a well, the basket must be plunged in several times quickly, so that the grain may be washed without being softened, to prevent the difficulty in drying, and to avoid wrinkling the skin.

From an accurate analysis of the smut of wheat, by those eminent chemists, Vauquelin and Fourcroy,§ it appears, that it is only a "residuum of putrified farina, which instead of the constituent elements of this last, viz., starch, gluten, and saccharine matter, contains only a kind of charred oily substance, very similar to that species of bitumen which derives its origin from animal or vegetable bodies.

For seed grain, Mr. Young places no dependence upon steeping in preventing smut in the succeeding crop; but there are several facts on record, which would lead us to incline strongly to the belief, that some have a powerful influence! a few of these shall now be mentioned.

1. Tull, the father of the drill husbandry, relates, that a ship load of wheat was sunk near Bristol, in autumn, and afterwards, at ebbs, all taken up; but being unfit for the miller, it was used for seed. At the following harvest, all the wheat in England was smutty, except the produce of this brined seed.

2. Mr. Richard P. Barton, of Frederick county, (Va.) relates, that in 1805, some fine wheat was brought from Redstone, Pennsylvania, to his neighbourhood, to exchange for salt; and having purchased two bushels, he steeped it in strong salt brine, and then sifted on it as much quick lime as would adhere to it. Two of his neighbours sowed some of the same wheat without steeping. The soil was the same, and the seeding done in good order and in good time. Mr. Barton's crop was free from smut at the following harvest, but the crops of the other two persons were much infected.*

Mr. Somerville, in the paper before quoted upon blight, smut and mildew in wheat, says, that from his own observation, aided by the testimony of the most respectable farmers, the salt pickle has always prevented the crop from suffering by smut, where it has been judiciously applied, yet that under certain circumstances it may be injurious.

3. In the Farmer's Magazine,† we find the following remarks, under the Banffshire quarterly agricultural report:—"What wheat we have, where free of smut, is of excellent quality. The advantage of pickling was apparent in a patch, where part had been pickled; and part of it not. The former was very little touched, while the latter was at least a fifth or sixth smutted. Several instances of this kind shew the utility of that preparation, and though it may not at all times be an entire preventive, it should not be omitted."

A writer in the same volume,‡ who signs J. W., and dates from Norfolk, offers for a trifling premium per acre, to insure the whole seed of England from injury by pickling, and the crop from being damaged by smut, provided the following recipe be judiciously applied:

"Steep your wheat five or six hours in water brought from the sea, or in common water salted, till it is strong enough to swim an egg, stirring it frequently. Procurer first unslacked lime, and when you begin to let the water off, slack your lime with a small quantity of it; when the water is completely drained off, turn the wheat out of your tub, and to every bushel of it allow a peck of lime; sprinkle this over it, and stir the whole with a shovel till they are completely mixed, so as every grain may receive a share. When dry it is ready for sowing, but should the lime prove troublesome or dangerous to the seedsman's eyes, some more water may be thrown upon it, for when the lime is dry, the cure is effected. If the wheat is meant to be drilled, sift the lime upon it, in the first instance, and from it, afterwards.

"The lime, I am persuaded, is the grand panacea, and I only recommend salt water in preference to fresh, because the lime adheres more closely to the grain, when the former is used. The principal difficulty in the process lies in the mixing of the wheat and lime completely, so as every kernel of the wheat may receive its due proportion of lime; for unless this is carefully attended to, danger will not be prevented; every kernel that escapes the lime, being liable to receive and propagate the disease. I once witnessed a case, which has fixed me most firmly in the opinion, that fresh lime is absolutely necessary to accomplish a cure. A very experienced and intelligent farmer having used all the wheat he had prepared for seed, wanted a few bushels to complete his sowing; and being at a considerable distance from the kiln, determined to make use of some old lime, which had been long in his possession. I examined the crop along with the owner, in the succeeding year, when it was ready

* Barton's Medical and Physical Journal. 2 Supplement.

† Vol. 5, p. 483, printed at Edinburgh. An excellent work, which ought to be in the possession of every farmer.

‡ Page 443.

* Transactions of Bath Society of Agriculture.

† Communications to Board of Agriculture, vol. 2.

‡ Same work and volume. § Ibid.

§ Annales du Museum d'Histoire Naturelle, No. 35.

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ble by every means in our power, the vegetable chemistry by absorption, is a means provided by providence, for its last filter; but to infer from this natural operation, that our efforts to render it purer by draining are pernicious, would be an equivalent inference to the idea, that the cultivation of the earth is pernicious because it is capable of spontaneous productions.

Campania and some other flat and marshy districts of Italy, are recorded in history as having been made so healthy and delightful in the flourishing period of the Roman empire by draining, as to have been selected by the opulent for country retirement, and splendid palaces. The drains neglected by the barbarous conquerors of Italy, have never been re-established by its modern inhabitants; and the swamps and marshes have restored to these districts an uninhabitable atmosphere, by having their waters, their trees, and their verdure restored to them.

As new countries are cleared and ploughed, they become more healthy. The draining effects of these two operations exceed those of any other, and by drying the earth very extensively, furnish the strongest evidence for ascertaining the effects of draining wetter lands. If the healthiness of a country is increased by these modes of draining, it will not be diminished by auxiliary modes.

The connexion between draining or drying the earth, and human subsistence, furnishes a kind of argument, neither logical nor demonstrative, and yet of conclusive force to my mind. Can it be believed that the author of creation, has committed the egregious blunder, of exposing man to the alternative of eating bad food, or of breathing bad air? If not, draining whether by the sun, the plough or the spade, being indispensable to avoid the first cannot wreck him on the second evil.

From the great improvement made in the health of the Eastern parts of the Union, if we may trust in recent history, by opening the lands to the sun, and with the plough; I long since concluded, that this improvement would be vastly extended by resorting to every other species of draining. And having removed some years past to a farm, reported to be extremely liable to bilious fevers, I threw several small streams into deep ditches, dried a wet road leading to the house, by open or covered drains, and cleared and drained some acres of springy swamp, closely covered with swamp wood, lying four or five hundred yards south of the house. The multitude of springs in this swamp, made deep, central and double lateral ditches, entering into it every six yards, necessary throughout the ground. The labour was great but the wet thicket is now a clean dry meadow. Perhaps an attachment to a theory may have caused me to imagine, that the improvement in the healthiness of my family and the draining improvements, have kept pace with each other; but I am under no delusion in asserting, that the healthiness of no part of the world, according to the tables of mortality which I have seen, has equalled it.

A very large proportion of the country on the Eastern waters consists of level land, swamps, bogs and marshes. The first is chiefly cleared and exhausted; the two last are chiefly in a natural state; and all generate poison for want of proper draining by the plough, by ditches, and by dams, instead of producing the richest crops of every kind for man and beast, of any other part of the country, without infecting the air.

The swamps, bogs and marshes, constitute one of our best resources for recovering the exhausted high lands, as furnishing employment for labour, and funds for manure; to the farmer they offer a certainty of profit, in exchange for the frequency of loss; and to the worn out land, an intermission of its tortures, and a cure for its wounds.

If the bounties of draining include an improvement in salubrity, in subsistence, in profit, and of

exhausted lands, they ought to excite an ardour which will presently leave behind the few and plain remarks which I shall make upon the subject; or at least to awaken great districts of country to the facts, that their best lands, those capable of yielding the most profit, if not those, only capable of yielding any or much profit; lands able to support more people than those at present under culture, lie wholly useless; except it may be useful to kill people who are employed in killing land, and thus shelter the survivors in some measure against the evils of penury.

CALCULATION OF THE GROUND GONE OVER IN PLOUGHING AN ACRE OF LAND.

(From Dickson's Agricultural Magazine.)

An acre of land (vide Hutton's Arithmetic, p. 18,) contains four thousand eight hundred and forty square yards; which being cut into four parts, namely, by slices of nine inches each, would give nineteen thousand three hundred and sixty yards. Now, there being one thousand seven hundred and sixty yards in a mile, (Hutton, p. 17,) if we use the latter number as the divisor, and the former as the dividend, the quotient will, I believe, amount to exactly eleven miles—thus:

4840 square yards in an acre.
Multiply by 4 slices in the breadth of each yard.

1760)19360(11 miles.

1760

1760

1760

Here we have no less than eleven miles, without considering the turns at the headlands; if we add them, the following augmentation of measure will arise from the most moderate calculation.

Let us take the average stretch, or length of furrow, at two hundred yards, which in nineteen thousand three hundred and sixty yards, will give nearly ninety-seven furrows in every acre. Now, the half breadth of each ridge, being taken at two yards, and allowing the plough to shoot two more beyond where it works, and as much to go back again, say six yards in all, at each headland; that multiplied by ninety-seven, will give five hundred and eighty-two, or about the third of a mile, merely for the ground which the plough itself goes over.

If we consider the great sweeps which long teams and bad drivers make at the ends of the land, we should begin upon an endless computation! I have supposed twelve feet ridges, and taken half that breadth as the overlap at every bout.

HORTICULTURE.

SCIENCE OF GARDENING.

(From Loudon's Encyclopedia of Gardening.)

FUNCTIONS OF VEGETABLES.

This subject necessarily involves the several following topics: Germination; nutriment; digestion; growth and development of parts; anomalies of vegetable development; sexuality of vegetables; impregnation of the vegetable germe; changes consequent upon impregnation; propagation and dispersion of the species; causes limiting the dispersion of the species; evidence and character of vegetable vitality.

Germination of the Seed.

Germination is that act or operation of the vegetative principle by which the embryo is extricated from its envelopes, and converted into a plant. This is universally the first part of the process of vegetation. For it may be regarded as an indubitable fact, that all plants spring originally from seed. The conditions necessary to germination relate either to the internal state of the seed itself, or to

the circumstances in which it is placed with regard to surrounding substances.

The first condition necessary to germination is, that the seed must have reached maturity. Unripe seeds seldom germinate, because their parts are not yet prepared to form the chemical combinations on which germination depends. There are some seeds, however, whose germination is said to commence in the very seed-vessel, even before the fruit is ripe, and while it is yet attached to the parent plant. Such are those of the *Tangelkolli* of Adanson, and *Agave vivipara* of East Florida, as well as of the *Cyamus Nelumbo* of Sir J. E. Smith, or Sacred Bean of India; to which may be added the seeds of the common garden radish, pea, lemon, &c. But these are examples of rare occurrence; though it is sometimes necessary to sow or plant the seed almost as soon as it is fully ripe, as in the case of the coffee-bean; which will not germinate unless it is sown within five or six weeks after it has been gathered. But most seeds, if guarded from external injury, will retain their germinating faculty for a period of many years. This has been proved by the experiment of sowing seeds that have been long so kept; as well as by the deep ploughing up of fields that have been long left without cultivation. A field that was thus ploughed up near Dunkeld, in Scotland, after a period of forty years' rest, yielded a considerable blade of black oats without sowing: it could have been only by the plough's bringing up to the surface, seeds that had been formerly too deeply lodged for germination.

The second condition is, that the seed sown must be defended from the action of the rays of light. This has no doubt been long known to be a necessary condition of germination, if we regard the practice of the harrowing or raking in of the grains or seeds sown by the farmer or gardener as being founded upon it.

A third condition necessary to germination, is the access of heat. No seed has ever been known to germinate at or below the freezing point. Hence seeds do not germinate in winter, even though lodged in their proper soil. But the vital principle is not necessarily destroyed in consequence of this exposure; for the seed will germinate still, on the return of spring, when the ground has been again thawed, and the temperature raised to the proper degree. But this degree varies considerably in different species of seeds, as is obvious from observing the times of their germination, whether in the same or in different climates. For if seeds which naturally sow themselves, germinate, in different climates at the same period; or in the same climate at different periods; the temperature necessary to their germination must of consequence be different. Now these cases are constantly occurring and presenting themselves to our notice; and have also been made the subject of particular observation. Adanson found that seeds which will germinate in the space of twelve hours in an ordinary degree of heat, may be made to germinate in the space of three hours by exposing them to a greater degree of heat; and that seeds transported from the climate of Paris to that of Senegal, have their periods of germination accelerated from one to three days. (*Familles des Plantes*, vol. i. p. 84.) Upon the same principle, seeds transported from a warmer to a colder climate, have their period of germination protracted till the temperature of the latter is raised to that of the former. This is well exemplified in the case of green house and hot house plants—from which it is also obvious that the temperature must not be raised beyond a certain degree, otherwise the vital principle is totally destroyed.

A fourth condition necessary to germination is the access of moisture. Seeds will not germinate if they are kept perfectly dry. Water, therefore, or some liquid equivalent to it, is essential to germination. Hence rain is always acceptable to the far-

The rearing of the silk worm will be introduced in this country more rapidly than the culture of the vine, for the reason that it suits the genius of our population better. In this business they will be enabled to enjoy the fruit of their labour soon after the labour is performed; for in about sixty days after hatching the worms, they can have raw silk to sell to the merchants; who, until there shall be silk manufactories established in this country, will find it a convenient article to make remittances to the eastward; nay, to England. From an experiment made here under my observation last season, on a small scale, (perhaps three or four hundred worms,) and another this season on about ten thousand worms, I am certain this country is admirably calculated to produce immense quantities of silk of an excellent quality, and that too from the native mulberry tree. In the course of those experiments the worms were confided to a little girl about ten years of age, who had never seen one before; not being attended to by her with any view to gain, the poor worms were frequently neglected: when they got to be of a certain size they were so crowded within their shelves that they were one on the top of another, and very irregularly fed; yet such was their healthy and thriving condition throughout the term of their lives, that scarcely any of them have been sick or died of a premature death. The American mulberry tree, on the leaves of which these worms were fed, abounds in our forests; in many places in this country (Switzerland,) there are trees enough within a small compass, to afford leaves to produce yearly even large quantities of silk. Several persons in different parts of the county have tried small numbers of the worm; one raised about one thousand, and another about six hundred, and they all succeeded beyond their most sanguine expectations, so far as to raise the worm to maturity in a healthy and thriving condition, without loss by sickness or premature death; but, for the want of experience, some of them did not provide them with proper places to spin their balls, and thereby lost some silk. It has been asserted, that the American mulberry is not as good to produce silk as the European. If an impartial trial has not been made of the relative value of the different species of that valuable tree in this country, it ought to be made as soon as possible, and that variety propagated which shall prove to be the best. In the mean time our native tree ought not to be neglected, but every farmer ought to be careful to preserve every one he finds growing on his land; and, moreover, plant an orchard of them of five, ten, or twenty acres; and when the trees shall have been planted four or five years, and a building suitable to rear the silk worm shall have been erected, in, or convenient to the orchard, our farmers will find that a square yard of good silk cloth can be produced with less labour than a square yard of common seven-hundred flax linen, and that one garment of silk will out-wear four of linen. Besides, it is believed by some physicians, that silk garments are more conducive to health than any other kind.

Wool might likewise be produced in large quantities in the western country, particularly in the thick settled parts, where wolves have disappeared. But there are dogs as mischievous as wolves, and many of our farmers would rather lose a dozen or two of sheep than to have Towzer, Cæsar, or Kill-buck injured; and, say they—"wool is too cheap; 25 cents per pound for wool will not pay for the trouble of raising sheep." Yet 25 cents per pound for wool is a better price, according to the labour and capital required to produce it, than 10 cents per bushel for Indian corn, or 25 cents per bushel for wheat, or 1½ cents per pound for pork—the expected prices for those articles the ensuing season; or even than 2½ and 3 cents per pound for smoked bacon, the present price of that article at the Cincinnati market. Yours, JOHN F. DUFOUR.

N. B. Does the Cherokee Rose succeed in Maryland, so as to answer for hedging? Would it succeed in Indiana? If so, where could I procure a small box of cuttings the next season? An answer from you, or some of your correspondents, will be received as a favour by me. J. F. D.

[No doubt it would succeed well; cuttings may be had in Maryland.]

LADIES' DEPARTMENT.

To Miss ———, ON HER MARRIAGE.

While to Hymen's gay seasons belong
Light airs and the raptures of youth,
O listen to one sober song!
O listen, fair Stella, to truth!

Farewell to the triumphs of beauty,
To the soft serenade of your bow'r,
To the lover's idolatrous duty,
To his vigils in midnight's still hour,
To your frowns darting amorous anguish,
To your smiles chasing every care,
To the pow'r of your eye's lively languish,
To each glance, waking hope or despair.

Farewell to soft bards, that in heaven
Dipt the pencil to picture your praise;
And blended the colours of even,
With morning's gay opening rays.

They no longer, on Thames, shall proclaim you
A Naiad new sprung from the flood;
Or to Bushy's soft echoes, shall name you
Bright Dian the Queen of the Wood.

Farewell to Love's various season,
Smiling days hung with tempest and light;
But welcome the reign of fair Reason,
Oh! welcome securer delight.

O! welcome in Nature's own dress
Purest pleasure of gentler kind;
O! welcome the power to bless,
And redeem fortune's wrongs on mankind.

Be a goddess indeed, while you borrow
From Plenty's unlimited store,
To gild the wan aspect of sorrow,
To cheer the meek eye of the poor.

While your virtues shall mix with the skies,
When your beauty, bright Phoenix, decays:
From your image new graces shall rise,
And enlighten posterity's days.

Future ages shall trace every air,
Every virtue deriv'd from your blood,
Shall remember that Stella was fair,
Shall remember that Stella was good.

MISCELLANEOUS.

CHESTER COUNTY CABINET OF NATURAL SCIENCE.

OFFICERS OF THE CABINET, FOR 1826.

William Darlington, M. D.	President.
Hon. Isaac Darlington,	} Vice Presidents.
William Jackson.	
John W. Townsend, Esq.	Corresp. Secretary.
David Townsend, Esq.	Rec. Sec. and Treasurer.
Henry H. Van Amringe, Esq.	} Curators.
Isaac Thomas, M. D.	
Abraham Marshall, jr. Esq.	

Address to the Chester county Cabinet of Natural Science, at the organization of the Society, on the 18th of March, 1826.—By Wm. Darlington, M. D.

GENTLEMEN,

Although but ill qualified for the task which you have assigned me,—and interrupted, as I have re-

peatedly been, since my appointment, by an attention to other, and indispensable duties,—yet it is with unfeigned pleasure that I approach the subject committed to me, and attempt a hasty sketch of what I conceive to be the leading objects connected with our Association. Having long been impressed with a sense of the importance of *Natural Science*, in promoting the welfare, and enhancing the character of our species,—and having, for a number of years, found the cultivation of one of its branches to be a source of the purest delight of which my own mind was susceptible,—I cannot conceal the gratification which I experience, on witnessing the laudable spirit with which you have embarked in the study of Nature; and the cheering auspices under which our Society has been instituted.

It is a pleasing circumstance, amid the arduous and perplexing duties of our respective vocations, and the turmoils inseparable from our condition in society, that there is a *common object* to which we can all occasionally turn, as with one heart, to find relief from the ruder cares of the world—and indulge in a recreation which is calculated at once to promote our usefulness as citizens—to chasten our affections—and elevate our intellectual character as men. That object is the study of nature—an acquaintance with her various productions, founded on scientific principles, by which we may be enabled to comprehend and appreciate the wisdom of their structure, the harmony of their arrangement, the laws by which they are governed, and the properties with which they have been endowed by a beneficent Creator. I hesitate not to aver, that no pursuit has ever yet engaged the attention of man, more happily calculated to enlarge his mind,—to wean and purify it from sordid passions and grovelling views,—or to exalt it to just conceptions of the power and goodness of the Deity, than a rational and philosophical study of the objects of Natural Science.

But it is not merely for its intellectual and moral advantages, that this science is entitled to our regard, and deserving of cultivation. A portion of it is indispensable to the success of many of our most important practical operations,—especially of those connected with agriculture, and the useful arts. We are obliged continually to draw from this fountain, much of the information which is necessary to constitute a decent share of intelligence in the common concerns of life: and the question so often asked,—“of what use is such knowledge to the man of business?” evinces a deplorable deficiency in those who seriously propound it. It is not pretended that it is necessary for every one to pursue the various branches of this, more than of any other science, to their minutest ramifications. That is an undertaking, interesting indeed, and often attended with important results,—but which is adapted only to the condition of persons of leisure. Yet I contend that the elementary principles of natural knowledge are not only accessible to every man, of ordinary capacity,—but that they are in a high degree subsidiary to all his most valuable temporal pursuits: for the principal business of this life is with the natural productions which the Creator has distributed around us—and surely it must be of some importance to us, that we should be correctly acquainted with them.

They are the subjects of all our practical operations. To comprehend their true character—to avail ourselves of their valuable properties, and obviate, or counteract their pernicious tendencies,—is the very end and aim of all our labours. And what is this but a definition of the science of which I am speaking? This science has for its object all created products of which man can take cognizance by his senses. It comprizes a knowledge of their distinctive characters,—their relations to each other,—and their capabilities to contribute to the enjoyments of life. Can it, then, be alleged that there

is no utility in such knowledge? Where is the pursuit so lofty, or the occupation so humble, that it does not, either directly or indirectly, draw largely upon our science for the means of success? What useful business is so abstracted from materiality, that it has no connection with either the mineral, the vegetable, or the animal kingdom? Shall the suggestion be listened to, in this age and country, that natural knowledge is an useless and frivolous acquisition? or that it is beneath the dignity of man to make himself acquainted with the works which God has made? I trust not. I am sure it will not within the pale of this society.

But it is alleged that the science is abstruse, and almost unattainable, by reason of the technical difficulties thrown in the way by those who have treated of it. This is an objection which, as in many other instances, vanishes in a great measure as we approach the subject.

It is true that the science has been somewhat oppressed with the technical lumber of erudite system-makers, who, in the exercise of their ingenuity, not unfrequently wander from the beaten track, and sometimes lose sight of practical advantages. But the evil has been magnified by those who seek to palliate their own deficiencies by decrying the labours of the learned. Amid all the mischiefs complained of, from the projects of scientific reformers, there has resulted much good from their speculations and researches. New views have been obtained, and improved methods devised for facilitating the acquisition of knowledge. The denunciation of *systems*, and *nomenclature*, as obstacles in the highway of science, frequently springs from the want of a just conception of their value. It is admitted that they are only the *implements* of learning, and not the ultimate object of our pursuit; but I apprehend that without a skilful acquaintance with those implements, and the modes of using them, the work itself would make a sorry figure. Instead of lucid order, and a language of precise and definite meaning, we should witness all the confusion and uncertainty which inevitably result from imperfect views, and from the use of terms of which the significations vary with every neighbourhood. There must be method, and nomenclature, in every art and science. Every business has its idioms—every artist has his peculiar phrases, to designate the apparatus, and processes, of his occupation. The most illiterate ploughman, with all his aversion to technicalities, talks of his *Clavis*, and his *Swingletree*, &c. and scarcely disguises his contempt for those who are ignorant of the meaning of his terms! Then surely it will not be denied that the various objects in nature should each have a significant and well defined name. To answer the purpose, it must be a name, too, which has not been appropriated to any other object.

Hence we may perceive the difficulties which naturalists had to encounter, in framing a nomenclature adapted to popular apprehension. To form a technical language from the vernacular tongue, which should be intelligible to all nations,—or even exempt from confusion among their own people,—was a task almost impracticable. But happily the classic antiquity preserved a language of precise and definite meaning, which they might have used with advantage. It is true, the language of the ancients was not so simple and unadorned as that of the moderns; but it was not so obscure and mysterious as that of the moderns. It was a language of precise and definite meaning, which they might have used with advantage.

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some, by those who are enlarging the boundaries of their knowledge. What should we think of the sagacity of a stranger, who, desirous to become acquainted with the inhabitants of a large city, would commence his undertaking by committing to memory the contents of the *Directory*? The absurdity of such a mode is palpable; and yet, if he went to work rationally, and extended his personal acquaintance with the citizens, he would soon feel the necessity of *names*, and perceive the utility of the book referred to. Just so it is with the various objects in nature. It is upon similar principles that nomenclature is beneficial; and it is upon the same plan that it ought to be acquired. Nothing can be more unfavourable to the progress of sound knowledge, nor more disgusting and repulsive to the student, than the mistaken practice of suffocating the mind with a mass of names and technicalities, abstracted from a clear conception of the objects to which they belong. I have been led into these cursory remarks, in vindication of the general merits of our science, from a knowledge that there are still some who proscribe it, as being amongst the frivolous and unprofitable pursuits of the idle and visionary—or who find fault with the technical difficulties which present themselves at the threshold of the study. I am sensible, however, that those prejudices are rapidly departing from the minds of the intelligent and thinking portion of the community. Let us hope that a final period will speedily be put to them, by the diffusion of rational information: and that the elements of Mineralogy, Botany, and Zoology, will ere long be considered an indispensable branch of education, in all our schools. When I witness the zeal and interest in the cause, manifested by the members of this Cabinet, I cannot but flatter myself that it will prove to be the *punctum saliens* of Natural Science, in our country,—whence a taste for such studies will be communicated to every ingenuous youth within its borders.

We have associated for the purpose of devoting a portion of our leisure to the acquisition and promotion of natural knowledge. Our primary object is to collect the materials for a complete history of the natural productions of the county in which we live. By the formation of a Museum, in this place, we may hope to possess specimens of every such production; accompanied by an accurate notice of their localities, characters, and such other information as may be interesting. We cannot doubt the willingness of our intelligent fellow citizens, generally, to aid us in the laudable undertaking; and that their contributions of specimens, from the various parts of the county, will be numerous and valuable. With a complete collection of our *minerals*, duly arranged, and a geological exploration of the county, an interesting chart of this region may be formed, which will exhibit at one view the character of the country, and the distribution of its mineral treasures.

By forming an *Herbarium*, which shall contain specimens of all our vegetable productions, we can make our quota towards the completion of the *American Flora*, whenever some master undertakes to arrange the materials,—but in the mean time, by exchanges with botanical societies, we can enrich our collections, and have plants of all the States, and of all the Tropics, at our disposal.

It would be satisfactory to know what, and where, the *weeds* which inhabit the waste lands of this State, are to be found. It would be satisfactory to know what, and where, the *weeds* which inhabit the waste lands of this State, are to be found.

ing acquisition. An accurate knowledge of our *insects*—more especially those which commit such ravages among the products of our farms, and gardens,—is a most desirable object. My limits forbid me to enlarge upon the many interesting considerations connected with these topics; but I waive the attempt the more willingly, as I know you are familiar with the most of them.

Did time permit, I could expatiate in detail upon the benefits afforded by natural science in exploding vulgar errors—expanding the mind, and fortifying it against the devices of knavish imposters, who are always on the watch to take advantage of ignorance and credulity. For want of this knowledge, worthy citizens have often been subjected to the grossest imposition. They have been led, by designing adventurers, to incur great expenses in searching for mineral treasures, in regions where a moderate acquaintance with Geology would have taught them it was in vain to look. An ignorance of Mineralogy has likewise led to many absurd expenditures in quest of the precious metals. It is indeed humiliating to reflect on the frauds which are practised upon worthy men, who become a prey to speculating empirics, from the sheer want of a little elementary knowledge of natural history. A destitution of botanical information is also a disadvantage in the practical pursuits of life; and often gives rise to, or favors the propagation of, the most absurd and ridiculous notions. There are many plants which it is always desirable to be able to recognize with certainty,—whether they be valuable or pernicious;—and yet serious mistakes are very frequently made. Active poisons have been mistaken for esculent vegetables; and the error attended with fatal results. Even some of the common obnoxious weeds, which it is so desirable to extirpate from our farms, are unknown to many agriculturists. I have seen an industrious farmer who was anxious to rid his premises of that notorious pest, the Ox-eye Daisy,—but, from his utter ignorance of the plant, was directing all his energies against one of a totally distinct, and comparatively harmless, character.—Such practical blunders, and defective information, touching the immediate objects of their profession, are any thing but creditable to American agriculturists, in this enlightened age. If there be those who do not choose to inform themselves beyond the manual operations of the field and the barnyard, it is at least due to the future good standing of their *children*, in an intelligent community, that the youths should have some chance to escape from the chrysalis condition of darkness and prejudice.

But there are other, and still more disreputable errors, growing out of an ignorance of the natural history of plants. We have all seen respectable men—some of them the owners and cultivators of valuable farms—who were yet so little acquainted with the laws of nature as to believe that plants are often converted, during growth, into others of a distinct kind, or genus. A farmer in this unfortunate state of mind, can of course take but little interest in procuring clean seed for sowing his fields, if the best of it is subject to such untoward pranks as that

The vulgar error of the transmutation of *wheat* into *bromus*, or *cheat*, is familiar to every one. Na there are some so strangely credulous as to imagine (I will not dignify the fantasy with the name of *belief*), that our cultivated *flax* is often changed into a plant, not only of a different genus, but of a remote class, and wholly distinct in all its natural botanic characters! I allude to the *alysium sativum*, of the botanists—a plant to which, in reality, the *flax* has no more affinity, than it has to the *Shepherd's purse*, or the *horse radish*! Such wretched absurdities are a reproach to the honourable profession of agriculture; and ought to be exploded without delay.

There is another subject connected with our institution, which, by its estimation, ought likewise to be improved. It is the collection of

biographical notices of those citizens of Chester, who have heretofore devoted their time and talents to the promotion of our favorite science. Although the study of nature, hitherto, has not prevailed extensively in our county, we shall find that we have abundant reason to be proud of the character and attainments of our *Marshalls*, our *Baldwin*, our *Jackson*, and other estimable predecessors in the walks which we have selected for our recreation and instruction. A faithful sketch of the lives and labours of those worthies,—who have left us the fruits of their industry, and the example of their virtues,—will be at once an appropriate tribute to the memory of departed merit, and an honourable evidence of the correct taste, and feelings, of an association emulous of their laudable career.

SPORTING OLIO.



(from the Petersburg Intelligencer.)

ANNALS OF THE TURF.—No. IX.

It is peculiarly pleasing to recur to those periods in Virginia, when the blooded horse held such a high place in the estimation of the people; when men, the most distinguished for their wealth, their talents or patriotism, were seen vying with each other who should import the finest blood horses or mares from England, or raise them from those already imported. It was the object of the writer in some preceding numbers, to call up those periods to review, and give an account of the most valuable stallions and mares, from which the Virginia stocks were bred during those times.

It is proposed to resume and continue this review, hoping it will serve to animate the breeders of the present day, and stimulate them to emulate their ancestors in their zeal and success in rearing the blood horse.

A tolerably complete list of the stallions imported into Virginia and North Carolina in latter times, say from 1795 to 1810 inclusive, will also be given, with their pedigrees annexed. Such a list cannot fail to be highly interesting to the breeder and sportsman, as all the blooded stocks existing at the present day in either of those states, partake of one or more of the crosses contained in this list.

Of the famous old stallions, Jolly Roger, Janus, Morton's Traveller, Fearnought and Medley, who contributed so much to the value of the Virginia race stock, an account has already been given. There were others that obtained much celebrity in their day as fine foal-getters.

1. Childers—He was a bay horse, of beautiful form, imported by the Hon. J. Taylor, sen., and was got by Blaze, a son of Flying Childers; his dam was a daughter of old Fox. Childers was a covering horse in Stafford county, Virginia, in the year 1752.

2. Justice, a chestnut horse, fifteen hands high, was bred by William Manby, of Gloucestershire, England, and got by Regulus out of the Bolton Sweepstakes. Justice covered in Prince George county, Va., in 1761.

3. Othello, a beautiful black, fifteen hands high, very strong, was got by Mr. Pantons's Crab, in England, out of the Duke of Somerset's favorite brood mare. Othello covered in Virginia, on James' river, in 1761, and was a most capital stallion. He got Selim and the dam of Mark Anthony.

4. Crawford, a fine dapple grey, fifteen hands high, was bred by his royal highness the Duke of Cumberland, and got by his Arabian. Covered in Virginia, in 1762.

5. Juniper, a fine bay, fifteen hands one inch high, foaled in 1752, was got by Babraham, one of the best sons of the Godolphin Arabian. The dam of Juniper, by the Stamford Turk, &c. Juniper covered in Charles City, Virginia, in 1762, and was an excellent stallion. He is a remote cross in the Virginia pedigrees.

6. Ranter, a beautiful bay, 15 hands high, foaled in 1755, imported into Virginia in 1762, by William S. Wadman. He was got by Dimple, a son of the Godolphin Arabian; the dam of Ranter by old Crab.—Bloody Buttocks, &c. Ranter stood in Stafford county, Va., in 1763, and is an old cross in our pedigrees.

7. Aristotle, brown bay, fifteen hands high, got by the Cullen Arabian, his dam by old Crab, &c. Aristotle was one of the finest and highest formed horses imported into Virginia in his day; he propagated a most valuable stock for the time he lived, having died shortly after coming into Virginia. He stood at Berkeley, Charles City county, in 1764.

8. Bucephalus, brown bay, 15½ hands high, foaled in 1758, was got by Sir Mathew Wetherston's horse Locust, his dam by old Cade—Partner, &c. Bucephalus was a very strong horse, and stood at Tappahannock, Va., in 1765.

9. David, a bay horse, fifteen hands high, well made, very active, and descended from the best stock in England. Stood in Virginia in 1765.

10. Dotterell, a high formed horse, 15½ hands high, a powerful and strong-boned horse, was got by Changeling, his dam by a son of Wynn's Arabian, &c. Changeling was one of the first horses in England of his day. Dotterell stood in Westmoreland county, Va., in 1766.

11. Merry Tom, a beautiful bay, 4 feet 11 inches high; he was got by Regulus, (one of the best sons of the Godolphin Arabian,) his dam by Locust, a son of Crab, his grandam by a son of Flying Childers, &c. In 1762, he won 300 guineas sweepstakes at Richmond; in 1763, he won 50l. at Durham, and the noblemen and gentlemen's subscription at Cupar, in Scotland. Merry Tom stood in Prince George county, in 1767; he was the sire of the noted horse Smiling Tom.

12. Sterling, a fine dapple grey, foaled in 1762, was got by the Bellsizes Arabian, (which Mr. J. Simpson offered 1500 guineas for,) out of Mr. Simpson's Snake mare; she was got by Snake (a son of the Lister Turk,) out of the Duke of Cumberland's famous mare, the dam of Cato. Sterling traces down to the famous old mare bred by Mr. Crofts, at Raby, in Yorkshire, and sold to the Duke of Cleveland. Sterling was a very fine horse, and became famous as a valuable foal getter. He was owned by Wm. Evans, and stood in Surrey county, Va., in 1768. He did not exceed 15½ hands in height.

13. Lath, a bay horse, 15 hands 1 inch high, strong and bony, was got by Shepherd's Crab, his dam by Lath, a son of the Godolphin Arabian, &c. Lath was landed in this country in 1768, and won that year the 50l. weight for age plate, at Newmarket, on Long Island. In 1769, he won the jockey club purse of 100l. at Philadelphia, beating the then best running horses in that state and from Maryland. In 1770, he also won the 100l. plate at the same place. In 1771, he won the 100l. plate at New Market, and never was beat but once, when he ran out of condition. Lath was descended from the most valuable blood in England, and contributed, in an eminent degree, to the improvement of the stock of horses of his day.

14. Whirligig was a dark bay, fifteen hands high, and was imported from England in the year 1773. He was got by Lord Portmore's bay horse Captain, (a son of young Cartouch,) his dam by the Devonshire Blacklegs, son of Flying Childers, &c. In April, 1769, when this fine horse was rising six years old, his owner received forfeit 1000 guineas from Rapid; the same year he beat Volunteer for

200 guineas. In October, 1770, he beat Warwickshire Wag for 100 guineas; and the same year he beat Atrides for 100 guineas, &c. Whirligig stood to mares in Halifax county, N. C., in the year 1777.

15. Selim. This beautiful and valuable stallion was a dark bay, a little rising fifteen hands high; was got by Othello (commonly Black and all Black,) whose sire was old Crab. The dam of Selim was the beautiful mare of that name, got by the Godolphin Arabian, and full sister to the celebrated horse Babraham, of England. Selim was a tried and approved racer, and a stallion of deserved celebrity. He stood in Virginia from the years 1770 to 1780, and propagated a valuable race of horses.

A retrospect of the older stallions of Virginia, evinces the important fact that they did not exceed from 15 to 15½ hands in height; and yet Virginia in those days had a stock of horses equal to any in the world. They were remarkable for substance or fine stamina. This stock of horses was the immediate descendants of the best Arabian, Barb or Turkish blood which had been early imported into England from Oriental countries, and has exhibited a degeneracy as to substance or stamina in proportion as it has been removed from this elder foreign blood.

The above stallions were the descendants of Oriental stock, as well as Janus and Fearnought, (who were the grandsons of the Godolphin Arabian.) During the days of those horses and their offspring, Virginia was famed for her fine saddle horses, and their weights on the turf was 144 lbs. for aged horses: now it is proverbial that the blood horse of Virginia rarely produces a fine saddle horse, nor have they a single turf horse capable of running four miles in good time with their former weight. All their good races are now made by young horses carrying light weight, say from 90 to 103 lbs.

The same retrospect of the English stock discloses the same facts: Lawrence remarks, that a "retrospect seems to evince great superiority in the foreign horses of former times, many of the best English racers in these days, being the immediate descendants, on both sides, of Arabs, Barbs, or Turks, or their sires and dams. That union of substance and action, which was to be met with in former days, has been of late years still more scarce."

As evidence of the correctness of Lawrence's opinion, it may be adduced that the established weights on the English turf in former days were increased to 168 lbs., and it was during this period that their horses continued to improve both in substance and speed, and notwithstanding the great weight of 168 lbs. they had to carry, they ran the four miles from 7 minutes 30 seconds to 7 minutes 50 seconds. From the days of Eclipse, the weights were gradually reduced, and have been brought down to 119 lbs., and on no track exceeding 133 lbs. Yet there is not a racer now in England able to run his distance in as good time as they were in former days with their high weights.

The present rage for breeding horses to a great height should not be so much attended to as obtaining the requisite substance; and from the above list we see that from 15 to 15½ hands in height, has combined with it that necessary union of substance and action which enabled the horses in former times to run in such fine form and carry such high weights. The most obvious way to insure this desirable substance or stamina in our stock, is to increase the weights of the turf to the old standard, and not to permit colts to start in public until four years old. The great superiority of the elder English race horses is, in part, to be attributed to the favourable circumstance of their not having started in public until five or six years old. This delay has the obvious favourable effect of enabling the bulk and substance of their limbs and inferior joints to become strong in proportion to their weight, and t

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AGRICULTURE.

ON THE ENEMIES OF THE WHEAT CROP.

By J. BUEL, OF ALBANY.

(From the Memoirs of the Board of Agriculture of the State of New York.)

These are *Insects, Smut, Mildew, and Rust*. Conjointly, they annually destroy from one fifth to one third of our wheat, the great staple product of our soil. A course of experiments, diligently persevered in for a few years, and by men competently qualified, would probably develop the causes of these evils, and suggest remedies for most of them. But no individual is able to conduct these experiments to a satisfactory result. This is one of many subjects in husbandry which must remain in doubt and uncertainty, until truth shall be established by some paramount authority, by an association of scientific and practical men, or an institution devoted expressly to agricultural improvement. The state would be remunerated a hundred fold for the expense of an experimental farm and school of agriculture, by the bare discovery of a preventive of the depredations of the Hessian fly.

All we can do under present circumstances, is, to collect and publish the most respectable authorities on this subject; barely remarking, that, as the questions involved in the inquiry are of the highest interest to the state, every suggestion which proposes a remedy for the evil, should be received with liberal indulgence; and though the means proposed may not seem commensurate with the object, they should not be rejected without a candid investigation and fair trial.

The Hessian Fly.

The first appearance of this diminutive, though formidable enemy, was noticed about fifty years ago, on the west end of Long Island, from whence it seems to have migrated in every direction, until it has overspread most of the middle and eastern states. Eminent practical farmers, as well as men of scientific acquirements, have devoted much time and labour, to acquire a knowledge of its history and habits, in order to be able to combat it successfully. No means of averting its evils, however, have yet been devised, sufficiently successful, or practicable, to inspire confidence, or to be adopted in general practice.

The earliest account of the Hessian fly that I have been able to find, was drawn up by Jonathan N. Havens, of Suffolk, in 1792, and was predicated upon the personal and attentive observation of that gentleman during two or three of the preceding years. According to the observations of Mr. Havens, the insect is viviparous, the maggot properly being the first stage of its existence, and in this state doing all the mischief to the grain. The maggots are generally deposited on the wheat between the first of September and the fifth of October, by a fly, "resembling the muschetto, except that it is much smaller, and has a short bill." They are found attached to the stalk, near the root, within the sheath of the first or second leaf, where they subsist on the juices of the plant, which they obtain by suction. In four or six weeks they attain their growth, and are transformed into the chrysalis, or second state. In this state they continue, attached to the plant, until the spring following; when, between the 15th of April and the first of May, the second transformation takes place, and the flies burst their prisons and escape by boring through the leaves which enclose the chrysalis. They immediately copulate, and deposit their young in five or ten days, that is, generally between the 20th of April and the 10th of May. The new swarm pass through the same changes, in time to complete two generations in the year—the chrysalis being generally left in the stubble after the grain

is harvested, and the fly again emerging the last of August and beginning of September. The insect does more injury in the fall than in the spring; and to the bald than to the bearded wheats. This Mr. Havens ascribes to a difference which he supposes to exist in the straw, that of the latter being more hard and fibrous. Thus the chrysalis may be found in summer in the stubble, and in winter in the green plant. To destroy the insect, or escape its ravages, Mr. H. recommends sowing bearded wheat, after the autumnal deposit of maggots, and the burning or ploughing under the stubble before the transformation of the chrysalis to the fly in August and September.*

Judge Peters recommends as a preventive, that oats precede the wheat crop; that the stubble be immediately ploughed under, whereby the insect will be deposited on the volunteer oats which spring up, and be buried by the last ploughing; and that the ground be put in fine order, well manured, and the seed sown late. He says, steeples "are not exclusively to be depended on."†

Joseph Cooper, of New Jersey, a gentleman of great experience and nice observation, after having made many experiments comes to this conclusion: "that if the farmers all through a neighbourhood would prevent, as much as possible, such grain as is nutritive to the Hessian fly from vegetating in the period between harvest and the first of September; have their land in a good state of cultivation, and sow about the beginning of October, or a little later; [this is calculated for the neighbourhood of Philadelphia,] and of the kind of grain which comes forward most rapidly in the spring, they would receive very little injury from the wheat fly." His observations go to show, that the insect may be found in all stages during the summer months. In April he pulled up plants materially injured, put them in a glass covered with perforated paper. In two or three weeks the fly came out. He observed some plants that were green at harvest, almost as full of the insect as a piece of tainted meat with fly blows.‡

Dr. Isaac Chapman, of Bucks, (Penn.) considers the fly oviparous, or as bringing forth eggs. In other particulars his description corresponds with that given by Mr. Havens, already noticed. After going through in detail, Dr. Chapman gives the following summary as the result of his observations on the habits and transformations of the insect.

"First generation.—1796. 1st. The eggs were laid the latter end of April or beginning of May.

"2d. In a few days the eggs were hatched, and the young caterpillars appeared in May.

"3d. They changed from the caterpillar state the latter end of May, and beginning of June; and,

"4th. The fly came out of the chrysalis the latter end of July and beginning of August, and deposited their eggs the latter end of August and forepart of September.

"Second generation.—1st. The eggs were laid the latter end of August, and in September to the 20th.

"2d. In a few days the eggs were hatched, and the caterpillar appeared in September.

"3d. They changed from the caterpillar to the chrysalis state in October, in which state they continued the succeeding winter.

"1797. 4th. The fly left the chrysalis state, and appeared in the latter end of April and forepart of May.

"To guard against their destroying the young plants in autumn,"—do not sow "until the period of laying their eggs is past, before the young plants appear in leaf," which period the Doctor considers the 20th September.

* See Transactions of the Society for the promotion of Agriculture and the Arts, vol. 1, p. 71 to 86, for this account at length.

† Memoirs of Phila. Society, 1802.

‡ Dom. Encyc., art. Fly, p. 177.

"To guard against their destroying the plants in the spring,"—he recommends that the wheat be sown on high and dry soils, and the ground well manured and cultivated, in order to insure an early and vigorous growth; and that seed be obtained from the south, as the plants of such will grow earlier in the spring than plants habited to our latitude.

Doctor Chapman wrote the communication from which the preceding abstract is made, in 1797. In November, 1820, in a note to the Secretary of the Bucks County Agricultural Society, he says,—"Upwards of twenty years experience has since convinced me, that the last three or four days in Sept., and the first week in October, is the best time for sowing wheat; about which time I have, for several years past, been in the practice of sowing; and though a few of the insect, in the caterpillar state, may appear in young wheat, they are so few as to do but little injury.*

Gen. John H. Cocke, communicated his observations on the fly to the Albemarle Society, Virginia, in 1817. He says the fly deposits its eggs on the blades of the wheat indifferently, at from half an inch to three inches from the main stalk or central shoot, in the furrows which run longitudinally, sometimes to the number of forty on a blade; that in four or five days they hatch into maggots, and crawl down the leaf to its intersection with the stalk; that by stripping down the booth or sheath, the worms were found in a state so minute as scarcely to be discoverable to the naked eye, lodged near the root, just at that part of the plant which is the seat of all their mischief; and where they are found in the subsequent chrysalis state. He recommends feeding off the crop.†

In a communication to the editor of the American Farmer, in October, 1823, Mr. Cocke reiterates his opinions advanced in 1817, and says they have been amply confirmed by subsequent experience.‡

"A King William Farmer" is of opinion, that the fly deposits its egg in the central blade in a few days or hours after the wheat comes up; and has no doubt they continue to deposit as long as they live. He recommends early sowing, and covering at least three inches deep.§

Dr. William Meriweather, late of Richmond, Va. says deep covering is often destructive of the crop, and is not a preventive of the fly. From thirty years experience, Dr. M. is satisfied that from one to two inches is a proper covering for the seed ||

James M. Garnet coincides with the King William Farmer. His communication was accompanied by five bundles of plants, a representation of which is furnished us by the indefatigable editor of the Farmer, and which serve to illustrate Mr. Garnet's views. Nos. 1, 2 and 3, show, in contradiction to Dr. Meriweather's theory, that where the seed is deposited more than two inches from the surface, the plants are furnished with two sets of roots, the seminal and the coronal. No. 2, also shows, that when the maggot destroys the seminal stalk, the root below the retreat of the maggot will force out new shoots capable of producing wheat. No. 3, proves the effect of the fly on shallow wheat, and shows, that the maggots easily find their way to the embryo crown, to the destruction of the plant, if no coronal roots are formed. No. 4, evinces the instinctive propensity of the maggots to descend as near to the crown of the plant as they can. No. 5, demonstrates that a double set of roots and branches is no proof that wheat is covered an unnatural depth, and also shows that the maggots do not penetrate the caudex to the embryo crown, when that is even two inches below the surface.¶

* See American Farmer, vol. 3, pages 166, 175.

† Ibid. vol. 1, p. 295-6. ‡ Ibid. vol. 5, p. 241.

§ Ibid. vol. 2, p. 227.

|| Ibid. vol. 1, p. 125.

¶ Ibid. vol. 2, p. 159-160.

Hezekiah McClelland compares the Hessian fly to the locust, and says it makes an incision in the tender blade, and deposits its egg; that early sown wheat always suffers most; that the fly is very hardy, he having seen them very active when the ground was hard frozen and a heavy white frost, when the house fly had become torpid.*

Edward Tilghman, of Queen Ann, Md. sowed the 18th September, and on the 5th October, the first seeding being up, and having generally put forth the second blade from two to three inches, observed the eggs on the blades, and also the flies in numerous instances, in the very act of making their deposits. Mr. T. has no doubt as to the identity of the insect, having, like many others who have described it, seen them hatch in tumblers from the chrysalis or flax-seed state.†

James Worth, of Bucks, Pa., in a communication to the Philadelphia Society for promoting Agriculture, dated Feb. 1820, details his observations made in October. On the 9th he was called to the wheat field by his neighbour, to see the fly; but was disappointed. The fly had disappeared; but on examining the blades of the wheat with a glass, he found an astonishing number of eggs; scarcely a plant had escaped, and on some he counted twenty. The next day he met with a young maggot, which had just burst its shell, and was crawling down the leaf; the next day he discovered a plant where the maggots had all left the leaf, which he inferred from the shell of the eggs, and on stripping down the leaf, he saw them on the stalk, about a dozen in number, and some of them within an inch of the root. On the 18th, the caterpillars had generally passed from the leaf, and many of them had reached the end of their journey. About the middle of November, in a warm exposure, some of them had changed to the flax seed or chrysalis state. He found the insect much the most numerous in stubble fields that had been pastured; and that grain sown after September had sustained no damage.‡

In February, 1821, Mr. Worth, at the solicitation of the society, gave a very detailed account of the fly. As his observations during 1820, developed new facts with regard to the insect, I shall state them in his own words.

"The fly evolved (says Mr. Worth,) from its pupa or chrysalis, about the 19th April, and deposited its eggs about the 24th; the deposit was made similar to that of last fall, except in some instances farther from the stock. The insect generally chooses the weakest plants, avoiding those which are forward or well grown. This is accounted for, as it seems necessary to clasp the leaf, by placing some of its claws on the opposite sides, in order to press the eggs into the gutter; hence there is a difficulty in managing a broad leaf; and in the few instances where I found it effected, the eggs were laid near the side or point, of course were more exposed to danger; and besides, the young caterpillar would not so easily make its way down the stem of a vigorous plant. It appeared to me, that many of the eggs of this brood were devoured by other insects; and that those which escaped were hatched in the course of two or three days. The pupa state commenced about the fifteenth of May. It again entered the imago or fly state early in June, and generally deposited its progeny from the 8th to the 10th of that month; but I saw it on the 12th in all its stages, to wit, the ovum, larva, pupa and imago—the egg, caterpillar, chrysalis, and fly. The eggs were laid on the upper leaves of the weaker or stunted wheat, and in some instances on the under as well as the upper side, and the larva became lodged about the two upper joints, but most about the upper. This second brood is very numerous; and there being pro-

portionably only a few plants that the fly seems to like, I have counted *two hundred and eight eggs on a single leaf*, and the caterpillars were in such quantities around the stock as to burst their covering. (the sheath,) and thus become exposed to the depredations of other insects. They were generally smaller than those of the other broods, and many of the uppermost perished for want of food, the sap of the plant being taken up by those below. Immense numbers, probably nine-tenths of the whole, were in some way destroyed—the busy ant appeared to be doing its part: But I may have mistaken the *ceraphron* of Mr. Say for it, (as I had not seen his description,) or both may have been engaged in the work of destruction. I am satisfied that some insect had deposited on the larva or pupa, as I found many in the latter state completely eaten up, and the case perforated by the parasite, and through the aperture, I presume it evolved in its perfect state. In harvesting, some of the stocks on which the pupa rest are left standing; others, and the greater part, are cut off, [with the grain.] Some of those cut off are so short as to be left strewn about the field, whilst the longer ones are bound in the sheaves, and carried to the stack-yard or barn; and it is probably owing to the various situations in which the pupa is thrown, that the succeeding brood becomes so irregular, the deposit of which commenced about the 15th of August, but more abundantly made about the 26th, and continued on in a less degree, till October, when those most early entered the fly state; and thus their ravages were carried on as long as the season would permit. I saw a few in the fields on the 25th November, and in the house as late as the 15th of December. It may then be said, that during the past year, there have been three complete broods, and partially a fourth."*

Mr. Worth recommends late sowing, giving time for the plants to take good root, say the last week in September, and first in October, (or about ten days earlier in our latitude,) and pasturing in the spring; by which latter practice the fly is deprived of a deposit for its eggs; or, if deposited, the eggs, or caterpillars are destroyed with the blades. In confirmation of the utility of feeding, Mr. W. states that one of his neighbours, on the 23d of April, turned his sheep on a lot of wheat, and kept them there until scarcely a vestige of the plants was to be seen. His neighbours told him he had destroyed his crop; nevertheless, it soon revived; grew in the most even and beautiful manner, and yielded more than thirty five bushels the acre.

(To be continued.)

MANAGEMENT OF MERINO SHEEP.

By WM J. MILLER, Esq.

(From the Memoirs of the Pennsylvania Agricultural Society.)

On Merino Sheep—their Management—Increase, and great importance, in the best modes of husbandry, as proved by the product of his farm.

DEAR SIR, Philadelphia county, March 7, 1824.

I have to thank you for your favour enclosing a letter from Mr. Rose, on the subject of Merino sheep, from which I am happy to observe, that we agree exactly, in sentiment, as to the value of that stock, as well as the price at which we could afford to produce that wool, say fifty cents per pound, unwashed.

With respect to the increase, and probable supply, a more perfect idea may be formed from the result of my experience, and the facts I shall give you, than any speculation on the subject.

I should have much more pleasure in complying with your request, could I flatter myself with the

hope, that any thing I could say on the subject would have a tendency to remove, in any degree, that inveterate and deep rooted prejudice so unfairly prevailing against that much abused and ill-treated, though most valuable animal, the Merino sheep—the more to be regretted, when we consider the invaluable acquisition they have proved to the industrious Saxons, who have for several years shipped to England above fourteen millions of pounds of that article, by their care and attention so much improved, that it has brought generally from 50 to 80 cents more than that of the original Spanish stock. By a price current of October last, Spanish wool is quoted 2s. 6d. to 4s. 6d.; while German Electoral is quoted 3s. 9d. to 6s. It is ascertained beyond dispute, that by equal attention, the same improvement in the quality of the wool takes place in America, by similar management; but we have been too long accustomed, in this happy country, to ready markets and high prices for our produce, yet, to see the necessity of paying that attention to economy in the management of stock, which the less fortunate German farmer has been forced to observe.

In order to give a correct idea of the benefits to be derived from sheep farming on an extensive scale, it may be necessary to mention the state in which the farm I now occupy was, previously to my taking possession of it in September, 1814; I should rather have said, previously to its being occupied as a sheep farm in 1809. It had been rented for some years to a tenant on shares, who, by dint of abundant ploughing, had paid the owner from 500 to 600 dollars per annum rent for his half.

My predecessor commenced, I believe, with 100 to 150 Merinos in 1809; and in September, 1814, I took possession, and paid, by valuation of two competent judges, for the produce then on hand and in the ground, viz: 36½ tons of hay, 270 doz. oats, 190 bushels of wheat, 100 bushels of corn, and 178 bushels of potatoes. Having assumed his contract, I had a stock of 236 sheep, 9 cows and 6 horses, to keep over winter.

Oats being then considered indispensable to Merino sheep in winter, I had to purchase that year 948 bushels, and 4 tons of hay; and in the second year, 1816, I purchased 366 bushels of oats, and 6 tons of hay. Next year you will perceive I sold 600 bushels of oats; and since then, I have purchased no oats, though occasionally some hay.

To give a view of the progressive improvement of the farm, it may not be improper to contrast the last crop with the stock now kept, with that above mentioned.

Besides having ample pasture for 338 sheep and 10 head of horned cattle, I cut upwards of 80 tons of hay and four of millet—had twenty acres in wheat, from which I have already thrashed out 400 bushels, which, at Thomas' mill has averaged very nearly 64 lbs. per bushel, and brought \$1.25 per bushel, being 5 cents more than the common wheat; and there is a barrack yet to be thrashed, which most probably will produce 60 bushels more. Of corn I had two fields, together 18½ acres—one of them 7½ acres, manured with sheep dung; from which together we have at least 800 bushels. Of barley I had 8 acres, which, owing to the badness of the seed, produced only 112 bushels. Potatoes 6 acres, about 760 bushels. My crop of wool should here be added, being the produce of 292 sheep—1252 lbs: also that of the dairy, being 530 lbs. of butter, from an average of 7 cows. Besides supplying the wants of my tenant's family in milk, consisting of ten persons, and supporting a family cow of my own. The produce of the piggery ought not to be forgotten; say 1600 lbs. of fine pork, besides pigs kept for next year.

As to manure, I have generally been able, from my sheep pen and barn yard, to put in well twenty acres of wheat, besides a patch of turnips and man-

* American Farmer, vol. 2, p. 234.

† Ibid. vol. 2, p. 235.

‡ Ibid. vol. 2, p. 180.

* Am. Farmer, vol. 3, p. 188.

might otherwise acquire; and the complaint that farmers make of land binding, would, I apprehend, seldom take place, in ground sufficiently rich, if this method of seedling was once introduced; and I have little doubt but the native green grass and white clover, if a proper method was once adopted for saving the seed, would answer the intention, without the introduction of foreign grasses.

DISEASES OF CATTLE IN THE SOUTH.

Whalley's Ford, (Geo.) July 15, 1826.

J. S. SKINNER, Esq.

Sir,—Does your section of the union suffer with the disease in cattle called (with us) the *Distemper*, I am but little acquainted with the symptoms of the disease from personal observation, but am informed that the animal is obstinately constipated, and the contents of one part of the stomach (perhaps the lower,) is found in a hard, compact and entirely dry state. I presume not one in an hundred recovers, or even survives the disease three days, instances occur of whole stocks being swept off in a week or two; and so well convinced are the poor farmers of the incurable nature of the disorder and its aptness to go through a whole stock, that so soon as one is attacked, he gives up the whole for lost; cattle driven from a climate more northern, are almost certain to be attacked, and die on the approach of hot weather, (the season of its prevalence.) Our lovers of "old Georgia roast beef" have their pleasures considerably marred by the unwelcome intrusion of the idea that they may be feasting on distempered meat, which is not only disgusting to a delicate stomach, but really dangerous, as alarming symptoms are the consequences of feasting on such beef. Can any of your numerous correspondents prescribe a remedy or preventive of this formidable disease?

J. B.

[Our correspondent would render a publick service by getting some respectable physician to write for the American Farmer, a memoir on this formidable disease, describing its symptoms with the remedies that have been exhibited, whether successful or not. All the medical schools should give lectures on comparative anatomy, and the outline of the veterinary art, until we can get regular veterinary schools established. It would give to the professor, especially, in all country situations, more honour and great practical utility.—ED. AM. FARM.]

PRICES OF PRODUCE, AND PRODUCT OF GRAPE CROP.

DEAR SIR,

Columbia, S. C. July 23, 1826.

We have paid here as high as \$2 per bushel for corn; and it is now \$1.25. It is much to be feared, that the prices will be as high next year: we never have experienced such a drought: what rains we have had, have been so partial, that in many places here has been little or none. I am unfortunately among the *driest*, and there has not been on my arm, one hour's rain since the corn was planted.

I leave you to judge what a prospect of a crop I must have, with bad management, and worse land, "quelque chose tout mal est leon", and notwithstanding the late frosts which have injured my grape vines very much, and this unparalleled drought, the grapes are doing exceedingly well, the vines look flourishing, and I shall probably begin my vintage the last of this week. This shows that dry weather suits the grapes; but I am not unwilling to attribute a small share of this success to my cares, and the experience I have acquired by a long course of sedulous attention.

I am, Sir, your obedient servant,

to writing, I shall send you an account of my success as well as the probable causes of it.—I was very glad lately, to see in your paper the interesting essay of Mr. Thomas McCall of Georgia, and he deserves well of his country for his exertions and the success that has crowned them: speaking of him, I must take the liberty of correcting a probable error, which is very pardonable, and is made by almost every person but a Frenchman, that translate from the French, the word "écu," crown. "Ecu" truly signifies crown; but what is called an écu in France, is what is called in England and in this country, half a crown: it follows therefore, that it is very probable, that this kind of error has crept in the bottom of the middle column of the 83d page, No. 11, vol. 8, where the price of an acre of vineyard is stated to have been \$13,000—when I think the French gentlemen who gave the information may have meant only \$6,500 per acre, which is a good price enough.

I am very respectfully, dear sir,

Your obed't serv't.

N. HERBEMONT.

PROSPECT OF CROPS IN MAINE—DIFFERENCE OF CLIMATE FROM THE SOUTH.

Dear Sir,

Gardiner Lyceum, August 3, 1826.

Enclosed is the balance due you for the American Farmer, which, I think well "worth the price of the subscription," although there is much in it which cannot be put in practice in our climate.

Yet there is more which might be, and ought to be. The season with us, is at present very favourable, warm and sufficiently wet. We are now reaping our wheat, it is pretty good; the grasshoppers have, however, injured it somewhat: they are very thick, and do much damage among cabbage, ruta baga, &c. Indian corn promises well—oats middling—hay, half what it was the last year—potatoes look well and many have had new ones for three weeks past, and green corn a fortnight; by this you may make some estimate of the difference of the seasons here and with you.

Yours, with esteem,

E. HOLMES.

HORTICULTURE.

SCIENCE OF GARDENING.

(From Loudon's Encyclopedia of Gardening.)

FUNCTIONS OF VEGETABLES.

Food of the vegetating Plant.

If the embryo, when converted into a plant and fixed in the soil, is now capable of abstracting from the earth or atmosphere, the nutriment necessary to its growth and development, the next object of the phytologist's inquiry, will be that of ascertaining the substances which it actually abstracts, or the food of the vegetating plant. What then, are the component principles of the soil and atmosphere? The investigations and discoveries of modern chemists have done much to elucidate this dark and intricate subject. Soil, in general, may be regarded as consisting of earths, water, vegetable mould, decayed animal substances, salts, ores, alkalies, gases, perhaps in a proportion corresponding to the order in which they are now enumerated; which is at any rate the fact with regard to the three first, though their relative proportions are by no means uniform. The atmosphere has been also found to consist of at least four species of elastic matter—nitrogen, oxygen, carbonic acid gas, and vapour; together with a multitude of minute particles, detached from the solid bodies occupying the surface of the earth, and wafted upon the winds.

100; and vapour in a proportion still less. Such then, are the component principles of the soil and atmosphere, and sources of vegetable nourishment. But the whole of the ingredients of the soil and atmosphere, are not taken up indiscriminately by the plant and converted into vegetable food, because plants do not thrive indiscriminately in all varieties of soil. Part only of the ingredients are selected, and in certain proportions; as is evident from the analysis of the vegetable substance, given in the foregoing book, in which it was found that carbon, hydrogen, oxygen, and nitrogen, are the principle ingredients of plants; while the other ingredients contained in them, occur but in very small proportions. It does not, however, follow, that these ingredients enter the plant in an uncombined and insulated state, because they do not always so exist in the soil and atmosphere; it follows only, that they are inhaled or absorbed by the vegetating plant, under one modification or another. The plant then does not select such principles as are the most abundant in the soil and atmosphere; nor in the proportion in which they exist; nor in an uncombined and insulated state. But what are the substances actually selected; in what state are they taken up; and in what proportions? In order to give arrangement and elucidation to the subject, it shall be considered under the six following heads: Water, Gases, Vegetable Extracts, Salts, Earth, Manures.

Water. As water is necessary to the commencement of vegetation, so also is it necessary to its progress. Plants will not continue to vegetate, unless their roots are supplied with water; and if they are kept long without it, the leaves will droop and become flaccid, and assume a withered appearance. Now this is evidently owing to the loss of water; for if the roots are again well supplied with water, the weight of the plant is increased, and its freshness restored. But many plants will grow, and thrive, and effect the development of all their parts, if the root is merely immersed in water, though not fixed in the soil. Lilies, hyacinths, and a variety of plants with bulbous roots, may be so reared, and are often to be met with, so vegetating; and many plants will also vegetate though wholly immersed. Most of the marine plants are of this description. It can scarcely be doubted therefore, that water serves for the purpose of a vegetable aliment. But if plants cannot be made to vegetate without water, and if they will vegetate, some when partly immersed, without the assistance of the soil; and some even when totally immersed, so as that no other food seems to have access to them; does it not follow that water is the sole food of plants, the soil being merely the basis on which they rest, and the receptacle of their food? This opinion has had many advocates; and the arguments and experiments adduced in support of it, were, at one time, thought to have completely established its truth. It was indeed the prevailing opinion of the seventeenth century, and was embraced by several philosophers even of the eighteenth century; but the ablest and most zealous advocates were Van Helmont, Boyle, Du Hamel and Bonnet, who contended that water, by virtue of the vital energy of the plant, was sufficient to form all the different substances contained in vegetables. Du Hamel reared in the above manner plants of the horse-chestnut and almond, to some considerable size, and an oak till it was eight years old. And, though he informs, that they died at last only from neglect of watering; yet it seems extremely doubtful whether they would have continued to vegetate much longer, even if they had been watered ever so regularly.

and is not convertible into the whole of the ingredients of the vegetable substance, even with the aid of the vital energy; though plants vegetating merely in water, do yet augment the quantity of their carbon.

Gases. When it was found that water is insufficient to constitute the sole food of plants, recourse was next had to the assistance of atmospheric air; and it was believed that the vital energy of the plant is at least capable of furnishing all the different ingredients of the vegetable substance, by means of decomposing and combining, in different ways, atmospheric air and water. But as this extravagant conjecture is founded on no proof, it is consequently of no value. It must be confessed, however, that atmospheric air is indispensably necessary to the health and vigour of the plant, as may be seen by looking at the different aspects of plants exposed to a free circulation of air, and plants deprived of it: the former are vigorous and luxuriant; the latter weak and stunted. It may be seen also by means of experiment even upon a smaller scale. If a plant is placed under a glass, to which no new supply of air has access, it soon begins to languish, and at length withers and dies; but particularly if it is placed under the exhausted receiver of an air-pump; as might indeed be expected from the failure of the germination of the seed in similar circumstances. The result of the experiments on this subject is, that atmospheric air and water, are not the only principles constituting the food of plants. But as in germination, so also in the progress of vegetation, it is part only of the component principles of the atmospheric air, that are adapted to the purposes of vegetable nutrition, and selected by the plant as a food. Let us take them in the order of their reversed proportions.

In the process of the germination of the seed, the effect of the application of *carbonic acid gas* was found to be altogether prejudicial. But in the process of subsequent vegetation, its application has been found, on the contrary, to be extremely beneficial. Plants will not indeed vegetate in an atmosphere of pure carbonic acid, as was first ascertained by Dr. Priestley, who found that sprigs of mint growing in water, and placed over wort in a state of fermentation, generally became quite dead in the space of a day, and did not even recover when put into an atmosphere of common air. Of a number of experiments the results are, 1st. That carbonic acid gas is of great utility to the growth of plants vegetating in the sun, as applied to the leaves and branches; and whatever increases the proportion of this gas in their atmosphere, at least within a given degree, forwards vegetation. 2d. That, as applied to the leaves and branches of plants, it is prejudicial to their vegetation in the shade, if administered in a proportion beyond that in which it exists in atmospheric air. 3d. That carbonic acid gas, as applied to the roots of plants, is also beneficial to their growth, at least in the more advanced stages of vegetation.

As *oxygen* is essential to the commencement and progress of germination; so also it is essential to the progress of vegetation. It is obvious, then, that the experiments prove that it is beneficial to the growth of the vegetable as applied to the root; necessary to the development of the leaves; and to the development of the flower and fruit. The flower-bud will not expand if confined to an atmosphere deprived of oxygen, nor will the fruit ripen. Flower-buds confined in an atmosphere of pure nitrogen, faded without expanding. A bunch of unripe grapes introduced into a globe of glass which was luted by its orifice to the bough, and exposed to the sun, ripened without effecting any material alteration in its atmosphere. But when a bunch was placed in the same circumstance, with the addition of a quantity of lime, the atmosphere was contaminated, and the grapes did not ripen. Oxygen therefore, is

essential to the development of the vegetating plant, and is inhaled during the night.

Though *nitrogen gas*, constitutes by far the greater part of the mass of atmospheric air, it does not seem capable of affording nutriment to plants; for as seeds will not germinate, so neither will plants vegetate in it, but for a very limited time, such as the *Vinca minor*, *Lythrum Salicaria*, *Inula dysenterica*, *Epilobium hirsutum*, and *Polygonum Persicaria*, that seem to succeed equally well in an atmosphere of nitrogen gas, as in an atmosphere of common air. Nitrogen is found in almost all vegetables, particularly in the wood, in extract, and in their green parts, derived, no doubt, from the extractive principle of vegetable mould.

Hydrogen gas. A plant of the *Epilobium hirsutum*, which was confined by Priestly in a receiver filled with inflammable air of hydrogen, consumed one-third of its atmosphere and was still green. Hence Priestley inferred, that it serves as a vegetable food, and constitutes even the true and proper pabulum of the plant. But the experiments of later phytologists, do not at all countenance this opinion. Our conclusion from various experiments is, that hydrogen is unfavourable to vegetation, and does not serve as the food of plants. But hydrogen is contained in plants, as is evident from their analysis; and if they refuse it when presented to them in a gaseous state, in what state do they then acquire it? To this question it is sufficient for the present to reply, that if plants do not acquire their hydrogen in the state of gas, they may at least acquire it in the state of water, which is indisputably a vegetable food, and of which hydrogen constitutes one of the component parts.

When plants were confined by Saussure in atmospheres of *carbonic acid*, they required nearly the same condition to support vegetation, and exhibited nearly the same phenomena as in nitrogen. Such as were deprived of their green parts died in the course of a few days. It cannot, therefore, be regarded as favourable to vegetation.

(To be continued.)

RURAL ECONOMY.

ON DISTILLING APPLE AND PEACH BRANDY.

(From the Archives of Useful Knowledge.)

Cooper's Point, 22d October, 1810.

The great plenty of fruit the present year, and the bad quality of the spirit distilled from it, in the common way, induce me to communicate some observations on that subject.

The first evil is, running it too long in the first distilling, which, beside injuring the spirit, will not pay for the time lost, and wood consumed thereby. The second and most injurious is, in rectifying, or second distilling, the running it too long, or till the spirit has an ill or disagreeable flavour, which greatly injures the whole that it is mixed with. The third is, want of care to put the liquor into clean casks: the contents of one musty or offensive one, will spoil the spirit of ten times its quantity, if mixed with it. From the experience of more than sixty years' practice in distillation, I find it best to shift the receiver as soon as the spirit runs as low as first proof, and to keep the remainder to distil with the low wines, or till there is a sufficient quantity to fill the still, with the addition of about one third water, which will imbibe much of the ill flavour, and leave the spirit more pure. But to make apple brandy to put into wine, or for other particular purposes, I would recommend filling the still half or two thirds full of good spirit; then to fill it to a proper degree with water, run it so long as the flavour is good; and treat the remainder as before. This operation I call washing; and apple brandy, thus prepared, is preferable for putting into wine or

cider, to any other spirit whatever; and, for common use, I have been in the practice of reducing high proof spirit with the last running from a cheese of good cider, or water cider, put in previously to the fermentation of the cider. That process will greatly improve the quality of the spirit, especially for mixing with water, and make it more mild to the taste in one week, than a year's age will when managed in the common way. A further improvement may be made in apple brandy, by putting in the still, when rectifying, two, three, or more pounds of sassafras root in what will make a barrel of proof spirit: a sufficient quantity of sassafras will give it the flavour of peach brandy, and in my opinion, if reduced as above, will make it full as good.

Although many persons are opposed to the distillation of cider, from religious principles, it appears to me that spirit is really necessary in many cases; and apple brandy, managed as above, and kept to a proper age, is as agreeable and more wholesome than what is generally procured, at great expense and risk, from other countries. Early-made cider, and that from rotten apples, is unfit for other purposes.

JOSEPH COOPER.

ON AMERICAN DYE DRUGS.

(From Partridge's Practical Treatise on Dyeing.)

There are, no doubt, a great many dying drugs in this country, which if known, might become valuable. It is much to be regretted, that some institution does not exist in this country to test and bring into notice, its native colouring matters. In the hands of a practical and theoretical dyer, many valuable discoveries might be made of new dyes, now lying dormant. Many of them might be used to advantage by the dyers of this country, and also become objects of some magnitude, as exports. It would require an appropriation of two or three thousand dollars per annum, to effect the object, and I should apprehend that five years would be sufficient to test all the colouring matter of the U. States.

I am at present acquainted with only four native dye drugs, the sumach, the yellow bark, the bark of the swamp maple, and the alder bark. The two last not being generally used here, I shall describe their properties—of the first, I need say nothing more than that for colouring of black, or tanning morocco skins, it is not half so good as the Sicilian; particularly for blue blacks, as the American works much browner, and does not produce any thing like so much colour, weight for weight.

The alder is found plentifully in swampy places; it is generally of small growth, and has a motly nut-brown bark; the sticks are cut in the month of April, or the beginning of the month of May, according to the climate and seasons when the sap runs; the bark is stripped off soon as cut, (which is easily done by children,) and is dried in the shade, when it is fit for use. The poles make very good bean sticks, or excellent fire-wood. This bark, when the colouring matter is strong, produces a brownish drab with alum, and a light forest drab when only a small quantity is used. When employed in the black dye, it increases the body of the colour, even more than sumach, and is equally durable.

The bark of the swamp or scarlet flowering maple, is said by Doctor Bancroft, to possess all the good dying properties of nutgalls, with a less portion of extraneous precipitants. I have tried this bark, and am convinced of its being a valuable colouring matter, for the black dye, and for pearl drabs. Its extract gives a strong blackish purple with copperas, in body equal to that from nut galls, and the colour looks brighter and clearer; but, like every thing else, it requires much experience to ascertain the quantity necessary to produce the best effect. I would strongly recommend the American dyers to bring it into use: let them first employ an

much of it as of gall-nuts, and increase gradually, until they find what quantity will produce the best effect.

The saw-dust of the white oak, gives the best and most permanent body to blacks, of any material I have ever used, and is not so apt to turn brown, as sumach, oak bark or any other material in common use. It requires about twelve pounds of oak saw-dust to twenty yards of broad-cloth, weighing twenty-four pounds, or half the weight of the cloth. The purple given by the saw-dust, is finer than that which is obtained from the nut-galls, or the swamp maple bark, and is highly permanent. It is not improbable, that the saw-dust of the swamp-maple, would be still better than that of the oak.

There is an acid in wood, called the pyroligneous, which is much used, when combined with iron, for dyeing and printing of black on cotton. It is highly probable, that when oak, or other saw-dust is boiled, this acid is extracted, and operates in producing the colour, in addition to the purple obtained as a colouring matter; for it is well known, that pyroligneate of iron, is the best mordant used in the black dye.

LADIES' DEPARTMENT.

REWARDS AND PUNISHMENTS, PRAISE AND BLAME.

(From Hints on Education and Nursery Discipline.)

Rewards and punishments, praise and blame, are the main supports of authority, and its effect will greatly depend on our dispensing these with wisdom and caution.

A very frequent recourse to rewards does but lessen their effect, and weaken the mind by accustoming it to an unnecessary stimulus, whilst punishment, too freely administered, will fret the temper, or, which is worse, break the spirit.

Locke remarks, "that those children, who are the most chastised, rarely prove the best men; and, that punishment, if it be not productive of good, will certainly be the cause of much injury."

It is better, therefore, if possible, to effect our purposes by encouragement and rewards, rather than correction. But if this be impracticable, we should still keep in view, that punishment, being in itself an evil, and intended simply to deter from what is wrong, and to induce submission and penitence, ought never to be extended beyond what is absolutely necessary to secure these objects, and, unless inflicted by parents, or those who are possessed of the first authority, should be of the mildest and least alarming character.

Not only the rod, but severe reproaches, rough handling, tying to bed-posts, the hasty slap the dark closet, and every thing that might terrify the imagination, are to be excluded from the nursery. If a nurse be under the necessity of punishing, she may confine him for a time in a light room, or move him from table, or all these simple measures will produce a natural consequence.

It is better, therefore, if possible, to effect our purposes by encouragement and rewards, rather than correction. But if this be impracticable, we should still keep in view, that punishment, being in itself an evil, and intended simply to deter from what is wrong, and to induce submission and penitence, ought never to be extended beyond what is absolutely necessary to secure these objects, and, unless inflicted by parents, or those who are possessed of the first authority, should be of the mildest and least alarming character.

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tinuance, in every way, increases the evils, and lessens the benefits which might result from it.

There is much, in education, to be done by watching our opportunities, by acting at the right season. With most children there is an era, and this often takes place as they are emerging from babyhood, in which a struggle is made for the mastery,—in which it is to be decided who is to rule,—the child, or those who are placed over him. At such a juncture, in order to determine the matter, and firmly to establish authority, it will be necessary to employ vigorous measures, and to suppress the first risings of a rebellious and disobedient spirit, by punishment, decisive; and repeated till submission on the part of the child, and victory on that of the parent, are completely secured.* So great is the importance of these contests; so great is the difficulty of carrying them on with the temper, and the union of firmness and affection, which they require, that it is desirable they should be conducted only by a parent. Punishment is more often to be inflicted simply as the consequence of a fault, and not with the idea, that it must be prolonged till the particular action required has been performed.

A child is desired, for instance, to put up his playthings, and he refuses with so much self-will, that his attendant cannot overlook it, and is under the necessity of telling him that he must be confined in the next room for a quarter of an hour; but let her beware of adding, that there he shall stay till he will put them up. This would serve merely to engage in the combat his pride and his obstinacy. At the end of the quarter of an hour she should release him from his imprisonment, without waiting to make conditions for his future obedience.

It has been said, indeed, that submission, on the part of the offender, is the object of punishment, and such submission as may entitle him to receive complete forgiveness. When a child has been corrected, we should not rest satisfied till this object has been attained; but it is not, in all cases, to be expected, either during the continuance of the punishment, or immediately afterwards.

A well trained child, if affectionately admonished after correction is over, and not being irritated at the idea that it may be continued, will generally yield at once; but it is not considered necessary to put this always to the proof. He has committed a fault, and has suffered the consequences. Here it is often wisest to leave the affair for the time, choosing the earliest favourable opportunity, when he has more perfectly recovered himself, for receiving his submission, and assuring him of forgiveness.

If his attendant have conducted herself in the right spirit, he will have felt the force of her correction, though he may not have shewn it at the time. The next day, if she desire him to put up his playthings, and he does so, she should say, "You have done as I told you, and I am glad of it."

It is better, therefore, if possible, to effect our purposes by encouragement and rewards, rather than correction. But if this be impracticable, we should still keep in view, that punishment, being in itself an evil, and intended simply to deter from what is wrong, and to induce submission and penitence, ought never to be extended beyond what is absolutely necessary to secure these objects, and, unless inflicted by parents, or those who are possessed of the first authority, should be of the mildest and least alarming character.

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restored as soon as possible to favour; and when he has received forgiveness, treated as if nothing had happened. He may be affectionately reminded of his fault in private, as a warning for the future; but, after peace has been made, to upbraid him with it, especially in the presence of others, is almost a breach of honour, and, certainly, a great unkindness. Under any circumstances, to reproach children in company is equally useless and painful to them, and is generally done from irritability of temper, with little view to their profit.

We are to remember that shame will not effectually deter children from what is wrong; and that in employing it too much as an instrument of education, we have reason to apprehend we may lead them to act from the fear of man rather than from that of God. Every thing, too, which may in the least injure the characters of children, is to be strictly avoided. To have the name of a naughty child will produce so disheartening an effect upon the mind, that the ill consequences may probably be felt through life. It is on this account desirable, that tutors, governesses, and nurses, be cautious of enlarging upon the faults of those under their care to any but the parents.

Blame, and even praise, are to be dispensed with nearly as much caution as punishments and rewards; for a child may be called "good," "naughty," "troublesome," "kind," or "unkind," till either his temper will be kept in continual irritation, or he will listen with perfect indifference.

A child must not be punished or reproved from the impulse of temper; we may regulate his actions, but we cannot hope to subdue his will, or improve his disposition, by a display of our own wilfulness and irritability; for our example will more than counteract the good effects of our correction. If irritated, we should wait till we are cool, before we inflict punishment, and then do it as a duty, in exact proportion to the real faultiness of the offender; not to the degree of vexation he has occasioned ourselves. A child should be praised, reprov'd, rewarded, and corrected, not according to the consequences, but according to the motives, of his actions—solely with reference to the right or wrong intention which has influenced him.

Children, therefore, should not be punished for mere accidents, but mildly warned against similar carelessness in future. Whereas some people shew much greater displeasure with a child for accidentally overthrowing the table, or breaking a piece of china, than for telling an untruth; or, if he hang his head, and will not shew off in company, he is more blamed than for selfishness in the nursery. But does not such treatment arise from preferring our own gratification to the good of the child? and can we hope, by thus doing, to improve him in the government of his temper, or to instruct him in the true standard of right and wrong?

Punishment, administered in anger, is no longer the discipline of love, but bears too much the character of revenging an injury, and will certainly excite in the sufferer a corresponding temper of mind. From fear, indeed, he may yield externally, but the feelings of his heart would lead him to resentment rather than to penitence and submission. And let us remember, that if we desire to perform our duty, we must not be actuated by any other glaring motives, but to the good of the child.

It is better, therefore, if possible, to effect our purposes by encouragement and rewards, rather than correction. But if this be impracticable, we should still keep in view, that punishment, being in itself an evil, and intended simply to deter from what is wrong, and to induce submission and penitence, ought never to be extended beyond what is absolutely necessary to secure these objects, and, unless inflicted by parents, or those who are possessed of the first authority, should be of the mildest and least alarming character.

called forth by such correction, as by the most gratifying rewards that could be bestowed upon them.

NATURAL HISTORY.

ON THE HABITS OF THE AMERICAN LOCUST.

Sir, Fauquier county, Va. July 23, 1826.

Having learned the last spring, that the locust was this season to make its appearance, after an absence of seventeen years, and finding the predictions (of the truth of which I was, I confess, at first quite incredulous,) actually verified by its arrival about the first of June, as foretold; I became a pleased, and endeavoured to be an accurate observer of the operations of this interesting insect, from its first appearance. I therefore anticipated pleasure from the perusal of the communication of your correspondent on this subject, published in the Farmer of July 14th; but finding his statement to differ so widely in several particulars from my own observations, I beg leave to send you a few remarks, of which you are at liberty to make such use as you may think proper.

The locust of this country, is entirely different both in its size and appearance, as well as nature and habits from the locust of Egypt, and undoubtedly appertains to a distinct genus. They rise from the earth about the first of June; and the ground which they have inhabited, is afterwards known by the small round holes which are in some places visible in considerable numbers on its surface. Immediately after leaving the earth, they endeavour to divest themselves of their skins, which, if the air be somewhat damp, they readily effect; but if, unluckily, the warm rays of the sun reach them, their shell is dried and contracted upon them, and they are unable to extricate themselves.

Their sole object, as that of the silk-worm, in appearing in the fly state, would seem to be the propagation of their species; for this is commenced immediately after their change, and they perish soon after the female has deposited her eggs.

The manner and means by which she accomplishes this object, are extremely curious, and to me novel. The instrument with which the perforation is effected, is half an inch in length, and cylindric to near the extremity, where it is flattened and dilated, presenting both a point and edge; so that the operation is more easily performed than could have been supposed, considering the size of the workman. This perforator which is also made tubular to afford a passage to the egg, is inserted beneath in the abdomen of the female only, projects forwards, and when not used is placed in a kind of sheath. It is not therefore, the male, according to the opinion of your correspondent, which punctures the branches, but the female.

The holes, which are from one half to three fourths of an inch distant, are arranged in rows, and are usually found on the under side of branches of about $\frac{1}{2}$ an inch in diameter, but rarely on opposite sides, unless the limb be nearly erect. They are generally made by the insect with its head depending, and are therefore directed downwards. When carried to a sufficient depth, the eggs are deposited singly, and in two layers; and the instrument is not removed until the hole is nearly filled with from 15 to 20 eggs. The process is then repeated, until perhaps 50 perforations, containing near 1000 eggs, are filled by the same female.

The eggs in those branches which are not killed by too much piercing, are gradually brought to maturity by the heat of the sun, and instead of remaining "torpid until spring," according to the unqualified assertion of the writer already alluded to, commence hatching in about a month. It is now more than two weeks since they commenced burst-

ing their envelopes; and this very day, on collecting and examining several branches which had been pierced, I found that many of the repositories contained nothing but dry skins, that some eggs had not yet arrived at maturity, and that many, when taken out and exposed to the air, hatched immediately. On opening a nest containing about 20 eggs, and observing their progress, I found that three had extricated themselves after three minutes, eight were on their feet in five minutes, of which one had crawled about eight inches, and that in ten minutes there were remaining but four or five which had not entirely freed themselves. I observed also, that when allowed to hatch upon loose earth, they soon penetrated it and buried themselves within it.

The insect which is excluded from the egg, excepting that its body is somewhat more slender, and its colour lighter, appears (viewed through a lens,) precisely similar to that from which its parent fly issues. Its large forefeet, the rudiments of wings visible upon it, the transverse rings upon its body, and even the hairs scattered over its surface, accord minutely with the same particulars in the large insect. With those points of close resemblance before us, aside from the fact of their disposition to enter the earth, which shows that to be the element designed by nature for their reception, could we doubt that this is the identical form under which it is hereafter to make its appearance upon the surface of the earth, after having completed its term of years beneath it? and that instead of "many," it undergoes but one "transmigration" or rather transformation "ab ovo usque—"? What then becomes of the caterpillar, and the other various forms which the N. Jersey writer supposes this Proteus to assume during its "destructive career," as he terms it?

But there are other inaccuracies into which the gentleman has fallen, and which he will excuse me in stating, since he has requested (what certainly he needed before he attempted to inform others, viz.) information respecting facts.

One error, unimportant indeed, but still requiring correction, is that an exudation of gum takes place from the wounded tree, and affords protection to the uncovered egg. This I have observed in no one instance; and did it universally occur, we should no longer be subject to these "depredations" which the writer imputes to this innocent insect, since what he considers their protection would inevitably cause their destruction; for, as I have shown, they require the air to hatch, and the earth to nourish them, from both which they would thus be excluded. Besides, there are very few trees except fruit trees, (with which the locust here seldom meddles,) which afford viscid secretions; and of these, the pine and sumach it totally rejects.

One remark with respect to the nourishment of the locust in its winged state. The gentleman asserts that they "destroy any green thing by their numbers and voracity." Now whether they draw up juices from the tree, or merely sip a little moisture as some suppose, or take no nourishment at all under this form, as I believe is the case of the silk worm, I am not entirely satisfied; but that they devour the leaves of trees or any other vegetable, I am convinced is wholly incorrect. For I have neither in the whole course of my observations, seen them so employed, nor were the leaves of the trees upon which they deposit their eggs, and remain in the greatest numbers (as the chinquapin,) more eaten than others. Besides, what of itself is proof positive, and what the gentleman himself, if he had used a little more accuracy in his investigation, might easily have discovered, the locust is entirely destitute of mandibles, or those organs for eating with, which the grasshopper and probably most other herbivorous insects are furnished.

If therefore, the facts which have been above stated, are correct, and there are gentlemen, to

whom I am indebted for directing my attention to some particulars, who can bear testimony to the accuracy of most of them, it is hoped that farmers will lay aside those fears of the return of the caterpillar the next season, which the N. Jersey gentleman has endeavoured to excite, and that, notwithstanding his too positive assertions, they will ascribe the ravages of that or any other insect, to their proper cause, and not to the harmless locust.

Yours, respectfully, J. W. R.

SPORTING OLIO.



ANNALS OF THE TURF.—No. X.

(From the Petersburg Intelligencer.)

The following is a list of the stallions (which may be considered as nearly complete,) imported into Virginia and North Carolina from the year 1795 to 1810 inclusive, with their pedigrees annexed. The first step, it is conceived, towards a Stud Book, or collecting an account of the blood of our horses, is to ascertain the number of stallions imported from England, with their pedigrees annexed; because it is to the importation of horses and mares from that kingdom, that we are indebted not only for the foundation of our stock of turf horses, but for their present value. There is not a pedigree of a single blood horse or mare in this country, but what goes in every cross, directly or remotely back to English stock.

The present attempt towards a collection so desirable, it is hoped, will be followed up by the zeal and intelligence of others, until a Stud Book is accomplished, which is at present so great a desideratum with the amateur, the sportsman and the breeder of the turf horse.

Arch-Duke. Imported in 1803, by Col. Hoomes, of Virginia; a brown bay, got by Sir Peter Teazle, dam Horatio by Eclipse—Countess by Blank—Rib—Wynn's Arabian—Governor—Alcocke's Arabian—Grasshopper.

Alderman. Imported into Virginia, by John Banks, of Richmond; bay horse, bred by Earl Grosvenor, and got by Pot8os, dam Lady Bolingbroke by Squirrel, out of Cypron, the dam of King Herod by Blaze—Bethel's Arabian—Greyham's Champion—Darley's Arabian—Merlin.

Archer. Imported from London, in 1802, by T. Reeves, Virginia; bay horse, bred by the late Duke of Cumberland, got by Faggerrill, dam sister to Crassus by Eclipse—Young Cade, Rib, Partner, Greyhound, Curwen's Bay Barb.

Admiral Nelson. Imported by Wm Lightfoot, Virginia; bay horse, bred by Lord Grosvenor and got by John Bull, dam Olivia by Justice, her dam by Pherby Squirrel, out of Tribble's dam by Regulus.

Bryan O'Lynn. Imported by Governor Turner, of N. C., was a bay horse and got by Aston, (own brother to Whiskey,) his dam by Lesang—Regulus, out of Prophet's dam by Partner—Greyhound—Curwen's Bay Barb.

Bedford. Imported from London in the spring of 1776, by Col. John Hoomes, of the Bolling-Green; a bay horse, bred by Earl Grosvenor, and got by Dungannon, (one of the best sons of Eclipse,) his dam Fairy by Highflyer—Fairy Queen by Young Cade—Routhie's Blackeyes by Crab—Warlocke Galloway by Snake—Bald Galloway—Curwen's Bay Barb. Bedford was the sire of some of the first rate horses of their day. The following were among the number of his immediate descendants, besides many others, viz: Fairy, who, it is believed, out of thirteen races (4 mile heats,) won twelve, and is this

only nag that ever beat Leviathan—Gallatin, Nancy Air, Dungannon, Peggy, Lottery, Cup-bearer, Volunteer, Nestor, Dutchess, Eolus, Whiskey and Shylock.

Buzzard. Chestnut horse, imported into Virginia about the year 1804, was got by Woodpecker, dam by Dux—Curiosity by Snap—Regulus—Bartlett's Childers—Honeywood's Arabian—dam of the two True Blues. Buzzard died in Kentucky aged 24.

Bergamot. Imported into Virginia; bay horse, got by Highflyer—dam Priestless—Matchem—Gower Stallion—Regulus—Hip—Hartley's Blind Horse—Flying Whig.

Clown. Imported into North Carolina by Wm. Cain; bay horse, bred by T. Douglass, was got by Bordeaux, (brother to Florizel,) his dam by Eclipse—Crisis by Careless—Snappina by Snap—Moore's Son of Partner, out of Driver's dam by Childers.

Cœur de Lion. Bay horse, imported by Colonel Hoopes into Virginia, foaled 1790, got by Highflyer out of Dido by Eclipse—Spectator—Blank.

Citizen. Imported from England in the ship Gosport, Capt. Chamberlin, and landed at Portsmouth, Va., on 26th Sept. 1803, then 17 years old. Citizen was a most beautiful animal, stood five feet one inch high, had great grandeur and substance, a rich brown bay with black legs, full of bone, and remarkably good action. He was descended from the best stock of horses in England, and was well known on the turf, having won 19 different races, and the most of them *four mile heats*. In a letter dated London, 1st July, 1797, it says, "that Citizen was a favourite, and ranked with Hambletonian, the most favourite horse that ever appeared on the British turf." Citizen was bred by Mr. Garforth, foaled 1786, and got by Pacolet, a son of Blank, a son of the Godolphin, his dam Princess by Turk, he by Regulus, a son of the Godolphin—Fairly Queen by Young Cade—Routhe's Blackeyes by Crab—Warlock Galloway by Snake—Bald Galloway—Curwen's Barb. Citizen got some capital racers in Virginia, and was the sire of the celebrated horse Pacolet. He died in 1810, aged 24.

Cormorant. A bay horse, imported by Colonel Hoopes in 1797; bred by the Earl of Egremont, and got by Woodpecker, his dam by Squirrel—Bajazet—Regulus—Lonsdale Arabian—Darley's Arabian—Byerly Turk—Taffolet Barb.

Cliffen. A bay horse, imported by Dr. Thornton, of Washington City, about the year 1799–1800. He was bred by the Earl of Derby, and got by Alfred (a son of Matchem,) his dam by Florizel, granddam by Matchem, &c.

Chariot. Bay horse, imported into North Carolina by James and Henry Line, in 1802. He was got by Highflyer, his dam Potosi by Eclipse—Blank—Godolphin Arabian—Snip—Partner—Bloody Buttocks—Greyhound—Makeless, &c.

Chance. Bay horse, imported by Col. Tayloe, was got by Lurcher, (son of Dungannon,) his dam by Hyder Ally—Perdita by Herod—Fair Forester by Sloe—Forester—Partner—Croft's Bay Barb—Makeless—Brimmer—Dodsworth.

Diomed. A chestnut horse, imported into Virginia in June, 1798, by Messrs. Lamb and Younger, and purchased by them of Sir Thomas Charles Bunbury. Diomed was foaled in the spring of 1777, and was 21 years of age when imported into Virginia. The following account of this famous horse, to whom the Virginians are so much indebted for their present fine race of horses, cannot be uninteresting. He was considered one of the best racers on the English turf. At three years old, he was winner seven times without being beaten, although he contended with the best horses then running. Among the races of that year he won a sweepstake of 500 gs. each, and also the Derby stakes at Epsom, which are the most important in England, and give the winner more credit than any in the kingdom; his winnings that year amounted to five thousand guineas. At four years old he received forfeit from

the brother of Mopsqueezer for 500 guineas; he won the Fortesque stakes, 11 subscribers, 50 guineas each; and over the Beacon Course, 4 miles and upwards, he won the Claret stakes of 200 guineas each, beating seven capital horses, and receiving forfeit from seven others. His winnings that year amounted to 2580 guineas. The year he was five he did not start, having fallen lame. At six years old he won the King's plate at Guilford, running *three 4 mile heats with 168 lbs. on his back*; he run also for the King's plate at Lewes, which he would have won had he not fallen lame. He run this year for two other King's plates, and was the second best horse for each: they were won by Anvil and Drone, two of the best horses then on the turf. He never started more, and was afterwards ranked among the best stallions in England. Diomed was got by Florizel, (one of the best sons of King Herod,) his dam by Spectator, grandam sister to Horatius by Blank—Flying Childers—Miss Bellvoir by Grey Grantham—Paget Turk—Betty Percival by Leedes' Arabian. Diomed was the sire of some of the first racers and stallions ever raised in Virginia; amongst them were Top Gallant, Wrangler, Peace Maker, Truxton, Hamblintonian, Florizel, Potomac, and Sir Archy.* Diomed died about 1807–8, upwards of 30 years old.

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 18, 1826.

J. S. SKINNER, Esq.

Lexington, August 14, 1826.

Dear Sir.—I am anxious to have recorded in your valuable Journal, the weight and size of a bull-calf, which I, and all others, who have seen him, have thought extraordinary. He was calved on the fourth instant, was weighed and measured on the morning of the fifth.—Weight, 102 lbs.—Measurement, from the back of the head to the rump, three feet six inches,—girth two feet ten inches.

This calf was got by a bull of the Improved Durham Short Horn breed, out of an heifer of the same breed, both imported in the ship Franklin, in August, 1824. I was compelled to have the heifer milked some days before she calved.

These facts confirm the good opinion I have always entertained of the superiority of this breed of cattle. Should you also, believe that these facts are worthy of record, you will oblige me by complying with my request. Truly yours, &c.

D. WILLIAMSON, JR.

* There was a report in circulation some few years back that Sir Archy was not a son of Diomed, but was got by an imported horse called Gabriel: to satisfy myself on the subject, I wrote to Col. Tayloe, who bred Sir Archy, and he replied as follows: "To your inquiries relative to the sireship of Sir Archy, I have to observe in reply that I had sold one half of Castanira (the dam of Sir Archy,) to Mr. Archibald Randolph, before Sir Archy was foaled, and that he was foaled on the south side of James river in the spring of 1805, the joint property of Mr. Randolph and myself. I believe that Gabriel was alive in 1804, but I am very confident he never covered at the same stand with Sir Archy. Gabriel and Sir Archy are something alike in form but not in colour, Gabriel being brown—can't speak positively as to marks, but have no hesitation in saying there can be no doubt of Sir Archy's being got by Diomed. Castanira was a dark brown, almost a black mare."

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	5	9	9	12
BEES-WAX, Am. yellow	—	30	32		50
COFFEE, Java,	—	16	17½	20	22
Havana,	—	15½	16½		20
COTTON, Louisiana, &c.	—	13	14		
Georgia Upland, . . .	—	11			
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	14	16	18
Dipt,	—	11			14
CHEESE,	—	9	10	12	15
FEATHERS, Live, . . .	—	30		37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	7 00			
FLAXSEED, Rough, . .	bush	75	80		
FLOUR, Superfine, city,	bbl.	4 25	4 37	4 50	4 75
Fine,	—	4 00			
Susquehanna, superfi.	—	4 00			
GUNPOWDER, Balti. .	25lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	65			
white	—	67	70		
Wheat, Family Flour,	—	85	95		
do. Lawler, & Red, new	—	75	83		
do. Red, Susque. . .	—	80	83		
Rye,	—	60	65		
Barley,	—	80	1 00		
Clover Seed, Red . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	scarce
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed, . . .	—	2 25		3 00	
Oats,	—	25	30		
Beans, White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	12		25	
HOGS' LARD,	—	7	9	12	
LEAD, Pig	lb.	6½			
Bar	—	7½	8		
LEATHER, Soal, best,	—	22	23	62	
MOLASSES, sugar-house	gal.	46		62½	75
Havana, 1st qual. . .	—	32	34	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar,	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27		40	
Spermaceti, winter .	—	70	75	88	
PORK, Baltimore Mess,	bbl.	11 00	11 50		
do. Prime,	—	8 50			
PLASTER, cargo price,	ton.	4 12½			
ground,	bbl.	1 50			
RICE, fresh,	lb.	22	3	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	7½	8	12
WHISKEY, 1st proof, .	gal.	32	33	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	34	35	50	
SUGARS, Havana White,	c.lb.	12 50	13 50	14	15
do. Brown,	—	8 50	9 75		
Louisiana,	—	8 00	9 75	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	16½		25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	42		75	
SHOT, Balt. all sizes, .	clb.	9 00		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 15	1 20	1 50	2 00
Lisbon,	—	1 15	1 20	1 50	1 75
Claret,	doz.	4	8	5 00	8 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full b'd	lb.	30			
do. crossed,	—	20	22		unwashed
Common, Country, . .	—	15	20		but free of
Skinnners' or Pulled, .	—	20	25		tags.

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AGRICULTURE.

ON THE ENEMIES OF THE WHEAT CROP.

By J. BUEL, OF ALBANY.

(From the Memoirs of the Board of Agriculture of the State of New York.)

The Hessian Fly.

No individual has done more to investigate this subject, and to find a remedy for the evil, probably, than Mr. Worth. And we have, in a communication made to the Pennsylvania Society, in 1823,* a further detail of his indefatigable labours, to advance the interests of the farmer. In this communication, Mr. Worth details the material facts, in regard to the Hessian fly, which we have quoted above, and recommends a change in the course of crops, as the most effectual remedy, viz: break up for wheat, follow with corn, and then, oats and grass-seeds—ploughing and harrowing the stubble immediately after harvest, and a second time before April, (May,) by which, a great number of the insects will be destroyed in the pupa state, and volunteer plants will throw up to receive the deposits of those which escape. Where pasturing is resorted to, he says the work must be completed in a few days, and immediately after the deposit; and that even then it may be a dangerous expedient, unless on strong grounds, and in favourable seasons.

In a conversation with Judge Burt, of the Senate, on this subject, he mentioned a fact strongly corroborative of the opinion held by Mr. Worth and others, that the insect is propagated in the stubble; and that the crop is ordinarily injured in proportion to its distance from that of the preceding year. In 1820, he sowed a field on his farm in Orange county, with twenty bushels of seed, adjoining the stubble of his preceding crop, from which it was separated by a stone wall. In April, it had so fine an appearance that his neighbours thought he would have forty bushels the acre. The insect, however, soon destroyed these flattering hopes; and the whole product was reduced by its ravages to sixty bushels. The crop was far the best on the side most remote from the stubble field, and diminished as it approximated the stone wall, near which it was scarcely worth harvesting; and in front of, and about the bars which connected the two fields, there was scarcely a head of grain. The Judge has no confidence in the efficacy of steps.

From what has been stated, we may draw the following conclusions:

1. That the eggs of the insect are deposited upon the wheat crop in the spring and in the autumn, and often during the summer, and that in four or five days, they change to the caterpillar state.

2. That the mischief is done by the caterpillar in September, before the severe autumnal frosts, or during the months of April and May.

3. That the insects remain in the chrysalis during the winter, where they have been deposited and nourished.†

* See their Memoirs, vol. 1, p. 165.

† While engaged in compiling these facts, January 25, I went to the fields, and gathered a number of wheat plants, the seed of which had been soaked in brine and limed, and also some volunteer plants, which had sprung up in my turnip field early in August, with an expectation of discovering the chrysalis. Of the first, taken from three different fields, sown the 5th, 11th, and 19th September, I selected six plants from each, and the same number from the volunteer wheat. I subjected the whole to a careful examination, aided by a good microscope, but found no chrysalis. The sown plants were found to be healthy and perfect, except in one instance, in which the roots appeared dead and shrivelled, and the leaves dry. This was evidently the effect of frost, as there was no indication of injury from insects. Three stems of the volunteer wheat, (a spontaneous growth from seed scattered in harvesting),

4. That they select the weakest plants—do most mischief when the growth is checked by unfavourable weather, or poverty of soil; and that a vigorous and constant growth renders their attacks comparatively harmless.

5. That there is no variety of wheat which can long escape their ravages.* And

6. The best remedies consist of a good tilth—a rich (but not wet,) soil—late sowing—ploughing in the stubble immediately after harvest—and, perhaps, feeding off the crop in the spring, with sheep, or other light-footed stock.

I will suggest another remedy, which does not seem to have been noticed by any writer on this subject. It is to sow POWDERED CAUSTIC LIME UPON THE CROP, while the insect is in the egg, or caterpillar, on the blade of the wheat, or even when it has descended within the sheath. The utility of this application has been demonstrated in the experiments of my friend and neighbour, William Chapman, which will be found at page 109, of this volume. My own practice affords a corroborating proof. In 1822, I sowed two pieces of spring wheat, of one and two acres, on grounds in all respects similar, and separated only by a small ravine. Some time in May, I discovered that a great number of plants were of a stunted growth, and of a dark green colour; and upon examination, I found the insect had obtained its lodgment within the sheath. I immediately sowed two bushels of lime upon one acre, while there was a heavy dew upon the ground, according to the directions which I had received from neighbour Chapman, and left the other to its fate. The limed wheat gave a good crop; the other, not more than half a one.

The manner in which this application resuscitated the crop, cannot be misapprehended. If applied when the egg, or caterpillar, is on the leaf, the caustic qualities of the lime, it is believed, prove fatal to the insect. If the caterpillar has passed the stock, the lime will pretty certainly reach it, being carried thither by the dew which falls upon the blade.

The Hessian fly commits its ravages more uniformly and extensively in the middle, than in the northern states. In Virginia, Maryland and Pennsylvania, it proves a dreadful scourge. In 1823, we are informed by Mr. Worth, the product of wheat in Pennsylvania was lessened one half, by this and other insects. Many farmers did not gather the amount of seed sown; and some found their fields not worth reaping. Its appearance among us is more uncertain, and its devastations are principally made in the spring; particularly north of the Highlands. This difference I ascribe to climate. In some counties, of the greatest elevation, upon the head waters of our great streams, subject to early

and each of the plants had from three to six stems—I found eaten, within the sheaf of the lower leaf, two of them transversely, or crossways, and the third remained attached to the plant, by a very small filament; four fifths of the stem being eaten away (within the sheath,) nearly the eighth of an inch in length. These stems were much withered. I supposed they had been eaten in the autumn.

At the same time I subjected to microscopic examination, a handful of wheat taken from the threshing floor. I found several kernels, perhaps one in sixty, with small perforations, similar to those found in peas, from which the fly or bug has escaped, and others which appeared half eaten. This could not have been done by weevil, as they have never been seen among us, except in a small parcel of Chili wheat, which I received last fall; and besides, the perforations were smaller than this insect makes.

* The Lawler wheat, carried from Pennsylvania to Virginia, was cried up for some time, in the latter state, as being proof against the insect; but I believe this is no longer pretended. I apprehend that our expectations from the "white flint" will prove equally fallacious.

and late frosts, the Hessian fly is yet unknown; while in less elevated districts, its ravages are sometimes great, and at others trifling, or not perceptible. I think the heavy frosts, which we almost invariably experience in September, about the time the wheat is sufficiently advanced to receive the deposit, is destructive to the egg and caterpillar, then on the blade. Hence the trifling injury experienced from them in autumn. The late frosts in spring, after the intervention of warm weather, which evolves the fly from the chrysalis, may prove equally fatal to them; and this may account for the circumstance of their not proving so baneful in some years as in others, and of the exemption from them altogether, of the more elevated districts, such as Delaware, Allegany, Warren, &c.

There are other theories in regard to the fly which deserve to be noticed, because they suggest other remedies—remedies which seem, in many instances, to have fully realized the hopes of those who have tested them; and which, should they ultimately turn out to be inefficacious against the Hessian fly, are nevertheless of acknowledged utility against other enemies of the wheat crop. One of these teaches that the egg of the fly (or of some other insect destructive to wheat,) is deposited in the downy end of the kernel; the other, that it is lodged in the grain while in a succulent state, in a manner analogous to the deposit of the maggot in the green pea: both are bottomed on the hypothesis, that the seed of the grain and of the insect go into the earth together, and that the same temperature gives action and expansion to each of them. And both suggest, as a remedy, the immersion of the seed before sowing, in a steep that shall possess the property of destroying the ova of the insect, without injuring the germ of the grain.

The evidences in support of these theories are few, and are principally drawn from the efficacy which has been found in the remedy proposed. I shall confine my quotations to what regards the first only.

A writer in the American Farmer, vol. v. p. 134, who subscribes "A Bucks county Farmer," (and we regret that he did not add the authority of his real name,) states, as the result of actual observation, that the insect is propagated from the eggs of the fly, deposited on the grain when ripening; that the fly may be seen by the middle of June, and from that time till wheat is cut, flying about and lighting upon ears of wheat; that it deposits its eggs upon the outer ends of the grain, where they may be seen with a good microscope or optic glass, sometimes to the number of six or seven on one grain.

"They remain there (continues this writer,) till the grain is sown. The warmth necessary to produce vegetation, is sufficient to animate the insect. It bursts the shell and enters the shoot, where it lies in a torpid state till next spring, except in some instances where wheat is sown early, the fly commences its ravages in the fall: when this is discovered, the best method is to turn sheep upon it, and pasture it short either in the fall or winter.

"The most effectual way to check the propagation, is in preparing the seed before sown, which should be in the following manner: Put your seed into a hogshhead, tub or vat, and cover it with water, let it stand ten or twelve hours; then put off the water, put the wheat upon a barn floor, sprinkle lime over it with a shovel, and mix it till it is well covered with lime. Let it remain in that state about 24 hours, and the eggs will be destroyed without any injury to the seed.

"The following brief sketch of the observations which led to the discovery above mentioned, is given, that all who wish to be satisfied of the truth of it, may have ocular demonstration of the fact, if they will take the trouble. On viewing several grains of wheat in a microscope, something resembling the eggs of insects was observed upon them.

Twenty grains were selected with those appearances; they were put upon some raw cotton and a little earth, in a tumbler of water, and observed every day; and on the day the grain opened and put forth its tender fibre, the insect burst from its shell, and was not to be seen.

"Ten days after, five of the grains, with their roots and blades, were taken from the glass, and carefully examined. In three of them the insects were found. The other fifteen remained and overspread the top of the glass. They were preserved till spring, when, on examining, every stock had an insect in it, some two, and one four.

"Twenty other grains were selected, and the lime applied for twelve hours. It was then washed and the colour of the eggs was changed, and being put into a glass in like manner as the other, the wheat grew, but the eggs did not produce. The roots were transplanted and grew well; and ten bushels of wheat, limed as above, produced a good crop, while the neighbouring fields suffered materially, and some were almost wholly destroyed by the fly."

George B. Everson (whose letter upon the subject I have somehow mislaid,) has stated to me his observations upon the fly, which accord with the preceding. He saw the fly upon the heads of the grain, and afterwards, with a microscope, saw the eggs in the crease of the kernel, and has no doubt but the egg of the insect is attached to the seed. Steeping the seed in pickle, and liming, he considers a preventive.

I never found the fly in my fields, except in the instance I have mentioned; and in no other instance have I sown wheat without having previously steeped and limed it.

In a conversation with Mr. Lake, of the Senate, he informed me, that he formerly suffered much in his wheat crop from smut and insects; that, having heard steeping in brine and liming recommended as a remedy for these evils, he subjected his seed to this process, and has pursued the practice since that time: that his crops have been uniformly healthy and abundant, while those in his neighbourhood have been more or less devastated.

I will only add, on this subject, the following letter from Col. Armstrong, of Dutchess:

"DEAR SIR,

December 13, 1824.

"My wheat crop having, in 1819, suffered severely from the fly, in the autumn of that year I divided my seed wheat into two parcels, one of which I washed carefully in a solution of unslacked lime and water, and while the mixture was in a state of ebullition. To dry the seed, it was rolled in gypsum, and then sown in the ordinary way. The other parcel was not limed, but in all other respects treated like the preceding. The result was, that the crop produced by the limed seed remained untouched by the fly, while that produced by the seed not limed, was very seriously injured. I have not since been in the way of renewing the experiment; but earnestly recommend it to all who are engaged in raising wheat.

"The fly, which preys upon the wheat crop.

"That which causes the *sedge*, or *stunt*—a disease that is found in the stocks, near the root, and about the joints—and another worm that causes the early change of colour of the ear."

The first, Mr. W. does not pretend to identify; but he conjectures it to be a species of aphid, or leaf-lice, which preys upon the roots in autumn and winter; causes the plant to throw out new roots

and assume a sedge like appearance in the spring. He thinks it harbours in the ground, and recommends salt and ashes to be applied at the time of sowing, and harrowed in with the grain.

The worm in the stalk is about three sixteenths of an inch long, pale yellow, with brown spots about its mouth. The deposits are made thrice a year, and a few days earlier than those of the Hessian fly. "The ravages of the first generation have usually been confounded with those of the fly, as the plants decline in both cases about the same time, and in the same manner; but such as are affected by this insect, can readily be distinguished by an enlargement of the culm near the roots. The second generation is lodged about the several joints, and may frequently be found in apparently healthy plants. This generation must materially lessen the quantity of grain, and I conceive the principal cause of the bad product from the straw. The third generation, in the autumn, is lodged in the manner of the first, and the change has also been charged to the Hessian fly.* The same remedies will apply to both.

Of the third species, we are merely informed, that the larva is lodged in the cavity of the straw, above the upper joint; is about the fourth of an inch long, of a glossy white; and that the pupa is more green than the larva, and is found on the outside of the straw, in the vagina of the leaf. The effects of this insect are often noticed in our wheat fields, but hitherto the injury has been too trifling to excite alarm.

Mr. L. Carter, of Virginia, has described a species of moth, which preys upon wheat.† According to his opinion, the egg is lodged in the grain before it hardens. When the grain is threshed, and laid in heaps, the grain heats, and the egg hatches; otherwise, it lies dormant until spring.

In 1807, a new disease appeared in the wheat in Maryland. In several counties, on the richest land, the crops were nearly destroyed. The main or top roots were destroyed, apparently by an insect; the colour declined, the blades dwindled and were drawn together, and small feeble stalks rose only to the height of six inches. Mr. Hollingsworth, who suffered greatly for several years, finally found a remedy in a dressing of lime and rotten compost upon the growing crop.‡

There was published in the Utica Patriot, of July 1804, a communication signed P. Colt, which discloses facts before unobserved. On searching for the cause of the yellow and rusty appearance of a crop of spring wheat, he discovered the roots to be dead, and decayed, like rotten flax, and found upon them a number of very small white worms, extremely lively, and from $\frac{1}{4}$ to $\frac{1}{2}$ inch in length. He also found, in the more decayed fibres, "insects in a quiet or dead state, or more properly speaking, in a state of absolute rest, and of the colour of a ripe flax-seed, though not of that shape."

Our knowledge of the insects which prey upon wheat is yet so imperfect, that it is impossible to ascertain their number, or to identify or describe particular species. Genain enumerates fifty kinds which are known in Europe as enemies to the corn crop. We know only a few, and those but imperfectly. And even the Hessian fly, whose ravages have caused the loss of millions of dollars, and whose devastations have been carried on under our own observation for almost fifty years, is so imperfectly known, that we are compelled to grope for truth among a contrariety of opinions, without knowing when we have attained our object.

Hatchel, and after him Professor Cooper, recommend immersing seed wheat in scalding water of 190° or 205° for five or ten minutes, as an effectual means of destroying the seeds of smut or insects

which it may contain.* The evidences of the utility of lime, are also respectable.

It was my intention to have collected the authorities upon the causes and prevention of *smut*, *mildew*, &c.; but other avocations prevent my fulfilling this intention. The reader will, however, find some excellent selections upon these diseases in this volume. I will barely remark, that my own practice and observation strongly recommend the use of salt and lime, in preparing the seed, the first in the form of a steep, and the latter in a dry powdered state. I never saw a smut head in my fields when the seed had been thus prepared. And when it is considered that lime certainly has proved efficacious against the fly, or some other insect enemy, the inducement for giving it a fair trial is greatly strengthened. The mildew or rust is generated, or propagated, by a moist, hot, and close atmosphere, and abounds most where fresh manures have been applied in quantity. These causes suggest the remedies; which are, to insure a better circulation of air, by laying the lands (especially if level,) in narrow ridges; and to prevent a too luxuriant growth, both of straw and weeds, by applying the manure first to a hoed crop, which will extirpate the weeds introduced by the manure, and deprive the latter of its heat.

ON WINTERING SHEEP.

By JEDEDIAH MORGAN, OF CAYUGA.

(From the Memoirs of the Board of Agriculture of the State of New York.)

To JESSE BUEL, Esq.,

Dear Sir—Agreeably to your request, I herewith transmit a brief statement of the facts and observations, in relation to the keeping of sheep; and should you deem them of sufficient importance, you are at liberty to make them public, for the benefit of others engaged in that important branch of agriculture.

It will be recollected, that in the summer of 1822 the drought was severe in many parts of our country. In the county of Cayuga, where I reside, and in the counties adjacent, it was greater than in any former year, since the settlement of the county. Our meadows were so much parched, that we did not secure more than one third of the hay we do in ordinary seasons. At this time, my flock consisted of about 500 sheep, including about 120 lambs; and as I had a very scanty supply of hay, I was obliged to resort to some expedient to winter my flock upon less than the usual quantity of it.

About the fifteenth of December, I commenced feeding them, at which time I had only about nine tons of fine timothy and clover hay. I divided my sheep into flocks of about 100, and commenced giving them, say half a gill of corn per day, in the ear, dividing it so as to give half of it in the morning, and the residue in the evening, except that to the lambs I gave nearly the same quantity of oats in the sheaf. I fed in this way, until about the first of January following, when the quantity of grain was a little increased: so that, between the 15th of December and the 15th of April following, I actually fed to my 380 sheep, 145 bushels of corn, and to the 120 lambs, 40 bushels of oats, which would be something less than a gill of corn and oats per head, per day, to both sheep and lambs, during the winter. The flock had little more than enough of hay to form a cud, except that in extremely cold weather, I directed them to be full fed on hay.

In this manner, 500 sheep were wintered, with the loss of only three lambs; and at the opening of the spring, they were in better health and condition than any flock I ever wintered in any former season, since I have been engaged in rearing sheep and growing hay.

I estimate the expense of keeping my flock of 500 sheep through the winter, as follows:

Nine tons of hay, . . . at \$7.00 . . .	\$63.00
145 bushels of corn, . . . 0.31 . . .	75.25
40 do. oats, . . . 0.19 . . .	7.60
Salt, with the hay, &c.	5.00
Attendance of shepherd,	20.00
	<hr/>
	\$171.55

I have adopted the same course with my sheep, this winter, and from letters recently received from my son, who has the charge of the flock, I entertain a confident expectation of the same result.

Albany, March 18, 1824.

SHEEP AND WOOL.

MR. SKINNER,

White Port, July 30, 1826.

The interest you have taken in the improvement of sheep as one of the most important relations in your editorial charge, and the politeness you have extended to my communications on the subject, induces me to make you a farther offering of the result of our shearing on the 27th of May last. In so doing, I trust you will not consider it a mere challenge with the vain glorious anticipation of superiority, but, as has been heretofore suggested, with the view of bringing out reports from others who have sheep worth propagating from, and to compare and estimate their value in their different capacities of usefulness. Last year, it is remembered that a small flock in the state of Maryland sheared a greater average by a pound to the fleece, than any reported, or indeed any I have known or heard of. They were of the Friesland, or rat-tailed breed. If these sheep have wool of good quality, and other properties corresponding in a reasonable degree, the owner would but do them justice by giving the public a better knowledge of them. The honourable competition amongst the fine wool growers, will serve in part as a stimulus to those who breed more for quantity, permit me to suggest the importance of giving an additional impulse to such as feel an interest in raising an abundance of good wool for domestic purposes on a valuable carcass. If it is most advantageous for our Eastern, and a portion of our Western country to raise sheep principally for their wool as an article of sale, it is not less important that we should raise it of an inferior quality on animals, otherwise better suited to the supply of our wants, in order to meet the demands of our purely domestic manufactures—such being the nature of much of our Southern population as to require an abundant supply of strong, warm, cheap, fabrick, made with most economy by every head of a family, a surplus of wool may be vended to our Eastern brethren, or exchanged for some of their more polished fabricks. I have thought, sir, in mentioning the facts of my last shearing, that it might add something to the interest of one of those useful and agreeable monthly meetings of your Trustees to have before them samples of wool taken from sheep of the first shear, producing in the dirt from 11 to 16½ pounds. Seven rams, from 14 to 18 months old, being spring and fall lambs, sheared 11, 11½, 12, 13½, 14½, 16, 16½ pounds, an average of more than 13½ pounds. Rams, wethers, and year old ewes, to the number of 29, sheared 302 lbs. an average of 10 6-16 of a lb. Thirty five ewes, either with lambs by their sides, or having had them the last spring, (with the exception of 7 fall lambs) sheared 234 lbs. an average of 6½ nearly. Many ewes varied from 8 to as high as 14½. The total average of 64 sheep is 8 3-8 lbs. The seven rams' fleeces were sheared and weighed in the presence of several neighbours and gentlemen of the adjoining counties, and the rest, with the exception of six or eight medium fleeces, by one of them. A little time back, when our fleeces were thought extraor-

dinary at 10 or 12 lbs., anticipations of 15 or 16 were thought entirely visionary. I am clearly of opinion there is still great room for improvement, and believe that in three years (barring accidents,) individual fleeces will be nearer 20 than 16 lbs., and an average obtained of more than 10 lbs.; this will be the result (if realized,) of crosses by sheep producing long and short wool, similar to such as is enclosed. A great average can only be obtained by the most uniform attention to the order of the flock, besides annually marking the least productive individuals for sale or use—and what is meant by this attention is not what many erroneously suppose (high feeding,) but a general regard to their constitution and habits, limited only by our knowledge of their peculiar nature. If such could be obtained, (which is scarcely presumable in every district of our country,) with occasional shifts, uniform salting, and water at particular seasons. As it regards food, sheep cannot be better treated, summer or winter, than in the use of a blue grass pasture, save when the snow is on the ground; then hay or trough-feed must be resorted to, as circumstances may require. But I have not, for the last three winters, fed with any thing more than an abundance of wheat straw, since there were but few days at a time excluding them from their pasture. As it regards uniformity of keep, it must be evident that an exuberant summer's grazing, followed by a dry, coarse and indifferent wintering, will have a wonderful influence in deteriorating both the form and fleece of an animal so susceptible of change as the sheep, and on the contrary, the most abundant and judicious winter keep will be lost on them if crowded early on young grass, affording little nutrition, or unaccompanied by a sufficient supply of salt and meal as a condiment to their stomachs: hence, without the latter precaution, the scours and other accompanying diseases. But I am getting into a dissertation which I did not intend. In conclusion, I must express a belief, that most farmers will meet with similar success, if they do not overstock themselves; in a period, governed in a measure by the quality of stock they begin their improvements on, if they will persevere in a judicious selection of rams, form first to be observed, then uniting in their fleece length and closeness—from 6 to 8 or 10 inches are good medium lengths; when the fibre is extended more than 12, it would have a tendency to degenerate into hairy wool, or become so thin as to be light and unproductive; and an exclusion of all ewes that do not prove their value by their first fleece. If it were possible to put on the back of one of our large rams, weighing, as they sometimes do, from 170 to 200, wool as close as that of a Spanish Merino, with the length of 10 or 12 inches, more than 30 pounds might be obtained to the fleece. The nearest approach to this in uniting quantity and quality; in judiciously combining length and compactness of fleece, is a secret well worth the attention of every breeder. I would venture an opinion, founded only on my little experience, that with a tolerably skilful intermixture of the close woolled Spanish Merino and our country breeds, that sheep of a distinguishing variety may be raised, to an extent fully and perfectly to meet the demands of every species of manufacture wherein pure wool is required. This suggestion is not intended in the least to supersede the earliest opportunities of improvement by foreign, or already discriminated races of sheep. Far from it, if we neglect to profit by the labours and ingenuity of hundreds who have gone before us, it will be our own fault. Lest the weight of wool here reported should be too trying to the credulity of some of your readers, and our anticipations be utterly set at naught, a further, but brief explanation, may be proper. In England, 25 and 30 pounds, if not more, have been shorn from sheep. Our approaches to this have been but feeble; sheep of ordinary size rarely ever shear more than 8 or

10 pounds of good wool, except they are enveloped in their fleeces; that is, so far as to have their legs to the knee, and their bellies covered, which is the case with those in question, especially under the latter part, of from 3 to 6 inches long, of good quality for domestic purposes. It is in a proportionate degree owing to this circumstance that such weights are obtained; and the greater the quantity of wool carried on such parts, finer, closer, and longer, so will be an increased ratio of the dirt attached to it. One important remark for those who may breed sheep of this description: attention must be paid to the rams, but particularly the wethers, that the urinal passage be not intercepted by the great growth of long wool surrounding it; from the accumulation of filth a mortification frequently takes place, if an inch or two of the wool is not shorn from around the part. I have formerly lost some of my best wethers for the want of this precaution. With my best wishes for the increasing usefulness of the Farmer,

I am, respectfully, yours,

R. K. MEADE.

ORCHARD GRASS.

J. S. SKINNER, Esq.

August 11, 1826.

Sir,—Although I have cultivated orchard grass for several years, and have observed and heard of many of its valuable properties, yet its superiority over every other grass, has never been so fully brought under my view as during the present season. About the 20th June, I cut a crop of seed from a field of orchard grass, and in mowing my timothy on the 21st July. (which was adjoining the orchard grass in a part of the same field,) my people were tempted by the fine swarth which the orchard grass afforded, to mow a part of the same ground from which I had saved seed about a month before. And although I had before witnessed the great rapidity of its growth, yet I was nevertheless astonished in walking over the field to-day to find the grass very nearly knee high where it had been closely mown only three weeks before, and when the timothy adjoining it would hardly furnish a bite for a sheep. Indeed, I have no doubt but that I shall, in the course of a few weeks, cut as heavy a crop of hay from this same ground as I have ever secured.

The great advantage of a grass which recovers so soon from the scythe and the tooth, are so obvious as to render it unnecessary to enlarge on the subject; indeed my object in making this communication is barely to state the naked fact, referring those who may be desirous of more particular information, to the pages of your useful journal, in which ample justice has been done this invaluable grass by several of your correspondents who have had longer experience and closer observation of it than myself.

I am, with respect, your obed't serv't, D.

COTTON.

(From Gray's Travels in Africa, p. 64, Lond. ed. 1825.)

"The country for some distance around this village, (Jaroomy,*) has the marks of civilization. There were some extensive cotton and indigo plantations; and although no rain falls at that season, they looked green and well. The soil, though sandy, appeared good and well fitted to produce all tropical grains, vegetables, &c. in perfection.

"We left Jaroomy at 6 o'clock, on the 26th of April, 1818, and travelled east over a gently ascending country, beautifully wooded, until half past 7, when we came to a small town called Jonkaconda,

*About 1½ or 2 degrees East of the mouth of the Gambia.

inhabited by Bushreens, and very prettily situated on a little hill under the shade of some few large trees, somewhat resembling the horse chestnut, except that the trunk is covered with large sharp protuberances in the shape of thorns. It produces a quantity of silky cotton, in pods of an oval shape, about five inches long and four in circumference. The natives do not make any use of it; they prefer the common cotton, from which they manufacture all their clothes."

WHITE FLINT WHEAT.

SIR, Buckingham, Va., Aug. 10, 1826.

I thank you for your attention in ordering the white flint wheat; I got 7 bushels, which with all charges cost me \$3 per bushel, which was seeded in good time and style, on good land; the grain is shrivelled and very imperfect. It will not suit the bottom lands of James river; it is too late, has too much blade and sap; and in any climate will be liable to rust and mildew. I consider it a *catch-penny*, for I have known the kind of wheat for 35 years, called the big white wheat, and by some called the big Bedford. We are labouring under a second long drought, but shall make bread in this section; in our maritime counties, it is said, the prospect is alarming.

Respectfully, yours,
CHARLES YANCEY.

PROSPECT OF CROPS.

DEAR SIR, Bath, N. C. Aug. 5, 1826.

Early in April we had some rain; since that time we have experienced the most excessive drought ever known with us. Our corn crops are now too far advanced in age to derive much benefit from any change of weather, however favourable. They are a melancholy spectacle. Some fields nearly barren; others promise a fourth or third, and low grounds but half or two thirds of a crop.

Oats pretty generally failed. The cotton crops are much injured, but are more promising than corn.

JOSEPH BONNER.

HORTICULTURE.

SCIENCE OF GARDENING.

(From Loudon's Encyclopedia of Gardening.)

FUNCTIONS OF VEGETABLES.

Food of the vegetating Plant.

Vegetable Extract. When it was found that atmospheric air and water are not, even conjointly, capable of furnishing the whole of the aliment necessary to the development of the plant, it was then alleged that, with the exception of water, all substances constituting a vegetable food must at least be administered to the plant in a gaseous state. But this also is a conjecture unsupported by proof; for even with regard to such plants as grow upon the barren rock, or in pure sand, it cannot be said that they receive no nourishment whatever besides water except in a gaseous state. Many of the partially decayed animal and vegetable substances float in the atmosphere and attach themselves to the leaves, must be supposed to enter the plant in solution with the moisture which the leaves imbibe; and so also similar substances contained in the soil must be supposed to enter it by the root: but these substances may certainly contain vegetable nourishment; and they will perhaps be found to be taken up by the plant in proportion to their degree of solubility in water. The quantity in which they exist in the soil is of the most important of these substances, and the quantity of their extract. When plants have attained the maturity of their growth, the principles of their food are gradually converted into dust or vegetable mould, which, as might be expected, constitutes a considerable proportion of the soil. The chance then is, that it is again converted into vegetable nourishment, and again enters the plant. But it cannot wholly enter the plant, because it is not wholly soluble in water. Part of it, however, is soluble, and consequently capable of being absorbed by the root, and that is the substance which has been denominated extract. Saussure filled a large vessel with pure mould of turf, and moistened it with distilled or rain water, till it was saturated. At the end of five days, when it was subjected to the action of the press, 10,000 parts in weight of the expressed and filtered fluid yielded by evaporation to dryness 26 parts of extract. In a similar experiment upon the mould of a kitchen garden, which had been manured with dung, 10,000 parts of fluid yielded 10 of extract. And in a similar experiment upon mould taken from a well cultivated corn field, 10,000 parts of fluid yielded 4 parts of extract. Such was the result in these particular cases. But the quantity of extract that may be separated from pure mould formed by nature upon the surface of the globe is not in general very considerable. After twelve decoctions, all that could be separated from mould of this sort was about one-eleventh of its weight; and yet this seems to be more than sufficient for the purposes of vegetation: for a mould containing this quantity was found by experiment to be less fertile, at least for peas and beans, than a mould that contained only one-half or two-thirds the quantity. But if the quantity of extract must not be too much, neither must it be too little. Plants that were put to vegetation in mould deprived of its extract, as far as repeated decoctions could deprive it, were found to be much less vigorous and luxuriant than plants vegetating in mould not deprived of its extract: and yet the only perceptible difference between them is, that the former can imbibe and retain a much greater quantity of water than the latter. From this last experiment, as well as from the great proportion in which it exists in the living plant, it evidently follows that extract constitutes a vegetable food. But extract contains nitrogen; for it yields by distillation a fluid impregnated with ammonia. The difficulty, therefore, of accounting for the introduction of nitrogen into the vegetating plant, as well as for its existence in the mature vegetable substance, is done away; for although the plant refuses it when presented in a gaseous state, it is plain that it must admit it along with the extract. It seems also probable that a small quantity of carbonic acid gas enters the plant along with the extractive principle, as it is known to contain this gas also.

Most plants are found by analysis to contain a certain proportion of salts, such as nitrate, muriate, and sulphate of potass or soda, as has been already shown. These salts are known to exist in the soil, and the root is supposed to absorb them in solution with the water by which the plant is nourished. It is at least certain that plants may be made to take up by the roots a considerable proportion of salts in a state of artificial solution. But if salts are thus taken up by the root of the vegetating plant, does it appear that they are taken up as a food? Some plants, it must be confessed, are injured by the application of salts, as is evident from the experiments of Saussure; but others are as evidently benefited by it. Trefoil and lucern have their growth much accelerated by the application of sulphate of lime, though many other plants are not at all influenced by its action. The *Parietaria* nettle and borage will not thrive, except in such soils as contain nitrate of lime or nitrate of potass; and plants inhabiting the sea coast, as was observed by DuRoi, will not thrive in a soil that does not contain a little of salt. It has been thought, however, that the salts which are actually

taken up by the root, though converted to purposes of utility by acting as astringents or corrosives in stopping up the orifices of the vessels of the plant, and preventing the admission of too much water: but it is to be recollected that the salts in question are found by analysis in the very substance of the plant, and must consequently have entered in solution. It has been also thought that salts are favourable to vegetation only in proportion as they hasten the putrefaction of vegetable substances contained in the soil, or attract the humidity of the atmosphere. But sulphate of lime is not deliquescent; and if its action consist merely in accelerating putrefaction, why is its beneficial effect confined but to a small number of plants? Grisenthwaite (*New Theory of Agriculture*, 1819, p. 111,) answers this question by stating, that as in the principal grain crops which interest the agriculturist, there exists a particular saline substance, peculiar to each, so, if we turn our attention to the clovers, and turnips, we shall still find the same discrimination. Saintfoin, clover, and lucern, have long been known to contain a notable quantity of gypsum (sulphate of lime); but such knowledge, very strange to relate, never led to the adoption of gypsum as a manure for those crops, any more than that of phosphate of lime for wheat, or nitrate of soda, or potassa for barley. It is true that gypsum has been long, and in various places, recommended as a manure; but its uses not being understood, it was recommended without any reference to crop, or indeed to the accomplishment of any fixed object.

It is very well known that some particular ingredient may be essential to the composition of a body, and yet make but a very small proportion of its mass. Atmospheric air contains only about one part in the 100th of the carbonic acid; and yet no one will venture to affirm that carbonic acid gas is merely an adventitious and accidental element existing by chance in the air of the atmosphere, and not an essential ingredient in its composition. Phosphate of lime constitutes but a very small proportion of animal bodies, perhaps not one part in 500; and yet no one doubts that it is essential to the composition of the bones. But the same salt is found in the ashes of all vegetables; and who will say that it is not essential to their perfection?

(To be continued.)

REMARKS ON THE ASCLEPIAS SYRIACA, OR COMMON SILK-WEED.

By William Zollkoffer, M. D. C. M. M. B. S. of London.

To J. S. SKINNER, Esq.

There is but little doubt, but what a very considerable number of our unknown indigenous vegetable productions, possess alimentional qualities as well as medicinal virtues; and, if the necessary course of experimental investigation was adopted, and indefatigably persevered in, in order to avail ourselves of a knowledge of the hidden treasures that at present lie concealed within the womb of future discovery; few years would elapse before we should have the pleasure of congratulating ourselves upon the introduction into our markets, of additional *eculearia*, the gustation of many of which, might be equal in point of delicacy and richness, to many vegetables that are cultivated by our Horticulturists.

Considerations arising from the importance of the introduction of nutritious articles into the *Materia Alimentaria*, have induced me to avail myself of every advantage that presented, of testing and examining the virtues of plants, with a view of communicating the successful results to the community.

During the prosecution of these inquiries, my attention was directed by a friend, to an examination of the article, which is the subject of the present paper; the result of which, I with pleasure transmit to your respectable Magazine, for publication if you

deem it worthy of an insertion in your useful "American Farmer."

Justly entitled to the notice and consideration of the lovers of good eating, is the *Asclepias Syriaca*, on the account of its being esculent, delicious, and nutritive, and when served up in the ordinary way in which the *Asparagus officinalis* is prepared, is by no means inferior to this article.

The genus *Asclepias*, is stated to have received its name from its discoverer, Asclepias, or from *Esculapius*, the god of Medicine. The species under consideration, ranks in the class *Pentandria*, the order *Digynia*, and in the natural orders, or families of *Contortæ* of Linnæus, and *Apocynæ* of Jus-sieu.

Generic Character.

Calix, a permanent perianthium, divided into five acute segments. The corolla consists of a single petal, which is divided into five deep segments at the mouth. Fruit consists of two follicles, containing a considerable number of imbricated seeds, winged with down. The flowers are borne on solitary peduncles, several together in umbels, and surrounded with a many leaved involucre.

Specific Character.

Asclepias Syriaca.—Flowers purple—leaves large and tongue shaped, resting on short footstalks, these are alternate and opposite—It grows from three to five feet high, and delights in a rich and prolific soil, inhabiting generally, creeks and rivulets, and other lone moist situations.

Chemical investigation.

In the course of the prosecution of an analysis of the *Asclepias Syriaca*, I digested several portions of the plant, previously reduced to powder, in sulphuric æther, and also in alcohol. The ætherial solution gave a precipitate upon the addition of alcohol. The alcoholic preparation assumed a pearly turbidness when distilled water was added. From these results we may conclude that this plant contains caoutchouc and resin. The ætherial and alcoholic solutions, upon being evaporated, afforded a residuum, which burst with great vividness, and exhibited a flame analogous to that resulting from the combustion of the spirits of wine. No results were obtained from adding gelatin, and the sulphate of iron to the infusion or decoction, from which it may reasonably be inferred, that it contains neither tannin or gallic acid.

Economical uses.

We are informed, that in Canada, many persons are in the habit of gathering the flower in the morning before the dew is off, from which they manufacture a kind of sugar; and that those persons who cannot procure feather beds, are in the habit of filling them with the downy substance attached to the seeds.

Medicinal character.

The cortical part of the root of the *Syriaca*, is employed for medical purposes; and it has been exhibited as an expectorant in some cases with very good effect. It possesses a slight share of narcotic power, but not in a sufficient degree to entitle it to a place in the class of narcotic remedies.

RURAL ECONOMY.

ON THE WILD INDIGO PLANT AS A SUBSTITUTE FOR WOAD.

(From Partridge's Practical Treatise on Dyeing.)

The wild indigo plant growing every where in this country, ought to be brought into use for the blue dye. I gathered some in the fall of 1821, too late in the season to obtain it in maturity, and had it boiled, and used the liquor in place of swill from

bran and madder, to assist the fermentation of the vats. The plants were too old to retain much of those succulent juices in which their value chiefly consist, yet they answered far beyond my expectation; for the liquors, so long as I was enabled to supply them with it, worked much more freely and more vigorously than in the usual way; and although this experiment was not decisive, for want of a sufficient quantity, and from the plant being too old when gathered, yet I am convinced, by the effect produced, that it might be used to considerable advantage. In Bancroft's first volume on permanent colours, this article is noticed as follows:

"It is well known, according to Mr. Clarkson, that the African dyers are superior to those of any other part of the globe.

"The blue dye is so much more beautiful and permanent, than that which is extracted from the same plant in other parts, that many have been led to doubt whether the African cloths brought into England were dyed with indigo or not. They apprehended, that the colours in these, must have proceeded from another weed, or have been an extraction from some of the woods which are celebrated for dying there. The matter, however, has been clearly ascertained: a gentleman procured two or three of the bales, which had been just prepared by the Africans for use: he brought them home, and upon examination, found them to be the leaves of indigo rolled up in a very simple state."

As this plant is found every where in the United States, and in many places in great abundance, it would be well to have some experiments made on it to test the superiority of the colour attributed to it; and if it should be found to possess the qualities ascribed to it, of which there appears to be but little room for doubt, it would become an object of great national importance, inasmuch, as the colour made from it would be superior to those obtained from Europe, and thereby give to the American fabrics a preference in the blue dye, in which they are now decidedly deficient.

I apprehend these balls are made by simply placing the leaves together face ways as they are gathered; that when a ball is made, it ferments and exudes sufficient moisture to cause an adhesion of the mass; and that this process develops the colouring matter, so as to enable a vat to extract it with sufficient facility.

The indigo made from the wild plant, is said to be of much better quality than that which is obtained from the cultivated; but that the former does not afford so great a quantity as the latter.

THRESHING MACHINE AND HORSE MILL.

MY DEAR SIR, Cedar Park, August 3, 1826.

I have just had my threshing machine repaired, and find, that in consequence of the uncommon fidelity and skilfulness of the mechanic, who has done the work, it will clean more wheat by 50 bushels a day, and do it with less labour (although considerably impaired by six years' work,) than it ever did since it was erected. The same thing also has occurred with a grist mill, moved by horse power, which I have used for several years, and had been frequently, very much disposed to abandon, in consequence of its working so badly, although it had in the mean time been overhauled and repaired by several professed millwrights, he has put it in such order, that it now grinds a third more meal, with about half the labour of the team. The wheat machine will thresh with great ease one day with another, 150 bushels of purple straw wheat, which is amongst the most difficult to clean, and allow a sufficient time to fan it out, and prepare it for market—and the mill will grind 40 bushels a day; I work four horses or six small mules in the former, and four small mules in the latter. I have mentioned these facts in hopes of benefiting both par-

ties. those farmers who have machines of this sort on their estates, and the faithful, industrious, and skilful mechanic, who executed my work—his name is Thomas Young, and his address Conway street, near the corner of Sharp street.

Yours, &c.

JOHN MERCER.

[There are few improvements in which farmers are more deeply and generally interested than in those connected with the preparation of grain for market or domestic consumption: hence, we avail ourselves of Col. Mercer's permission to publish the above. It would have been yet more satisfactory, if he had stated the force necessary for working the threshing machine and the horse mill, and the quantity that each will do, as well as the first cost of each.]

METHOD OF CLEANING MUSTY CASKS.

By M. LENORMANDES.

From the Annales des Arts et Manufactures.*

The author mentions, that he was taught the secret by a countryman.—He took, says he, "cow-dung very fresh, and diluted it with warm water, so as to make it sufficiently liquid to pass readily through a large tunnel. He previously dissolved in this water 4 lbs. of common marine salt, and one pound of alum. The quantity of this liquid, was equal to about a sixteenth part of the capacity of the cask. He put the whole in a pot, and heated it to ebullition, stirring it continually with a wooden spatula. He poured the hot liquor into the barrel, bunged it tight, and shook it five or six minutes every two hours, taking care, after shaking, to pull out the bung, when a thick vapour, with a strong smell of must, issued from it. Twenty-four hours afterwards, he rinsed the barrel till the water came from it perfectly clear. During this operation, some water was heated, in which had been put two pounds of salt, and half a pound of alum, which he poured quite hot into the barrel; he shook it once, as in the former operation, and left the barrel well bunged. Two hours after, the water being still warm, he emptied it out, leaving the barrel to drain, and bunged it up very tight, till it should be wanted for use. A greater quantity of cow-dung, salt, and alum, than the above will not injure the operation.—Cow-dung must be used, that of oxen is useless.

LADIES' DEPARTMENT.

[From a female Correspondent in South Carolina.]

SIR,—I cannot help telling you that I am very much pleased with your plan of appropriating a portion of the American Farmer to readings for the female portion of the farmer's family. With the articles generally under the Ladies' Department, I have been much gratified, and especially with the "Whispers" to newly married people, and others on the same subject; except with one from the sermons of William Cobbett, on the unnatural practice of putting out children to nurse. When we wish to correct a bad practice, we must not exaggerate its evils and its motives to such a degree, as to render the reading of the essay disgusting, as he has done by his gross calumnies on the female part of mankind.

On this subject, I have never seen any thing superior to the enclosed extract from Letter XXIII. on the Education of Venus, 2d volume of "Lettres à Emilie sur la Mythologie, par C. A. Demoustier." The whole work from which it is taken is elegant. You have invited your female readers to contribute to this department of your paper; perhaps some of them to whom it may serve as an amusing exercise,

* Translated in Repertory of Arts, Vol. I. New series.

will send you a translation. I know of nothing equal, much less superior on the subject.

ELEGANT EXTRACT.

"Unjour, Cypris, vous serez mère,
N'abandonnez jamais le fruit de nos amours
Aux mains d'une mère étourdie.
Nourrissez notre fils; remplissez nos beaux jours
Des soins intéressantes de ce saint ministère.
Les jours pour le plaisir ne seront point perdus:
La nature, aux bons cœurs, donne pour récompense
Des devoirs les plus assidus
Les plus douces des jouissances.
Vous les mériterez: de votre nourrisson
Une outre n'aurapas la première caresse.
Vous jouirez avec ivresse
Des prémisses de la tendresse
Et des éclairs de la raison.
Souvent, tandes que de sa mère
Ses lèvres presseront le sein,
En admirant son minois enfantin,
Vois croire déméter quelques traits de son père.
Mors nous sentirez palquiter votre cœur
Du plaisir de trouver l'auteur dans son ouvrage,
Et de l'espoir de voir croître, sons votre ombrage,
Le fruit dont vous aurez alimenté la fleur."

METHOD OF DETECTING THE PRESENCE OF ALUM IN BREAD.

Pour upon two ounces of the suspected bread, half a pint of boiling distilled water; boil the mixture for a few minutes, and filter it through unsized paper. Evaporate the fluid, to about one fourth of its original bulk, and let gradually fall into the clear fluid a solution of muriate of barytes. If a copious white precipitate ensues, which does not disappear by the addition of pure nitric acid, the presence of alum may be suspected. Bread, made without alum, produces, when assayed in this manner, merely a very slight precipitate, which originates from a minute portion of sulphate of magnesia contained in all common salt of commerce; and bread made with salt freed from sulphate of magnesia, produces an infusion with water, which does not become disturbed by the barytic test.

Other means of detecting all the constituent parts of alum, namely, the alumine, sulphuric acid, and potash, so as to render the presence of the alum unequivocal, will readily suggest itself to those who are familiar with analytical chemistry; namely: one of the readiest means is, to decompose the vegetable matter of the bread, by the action of chlorate of potash, in a platina crucible, at a red heat, and then to assay the residuary mass—by means of muriate of barytes, for sulphuric acid; by ammonia, for alumine; and by muriate of platina, for potash.* The above method of detecting the presence of alum, must therefore be taken with some limitation.

There is no unequivocal test for detecting in a ready manner the presence of alum in bread, on account of the impurity of the common salt used in the making of bread. If we could, in the ordinary way of bread making, employ common salt, absolutely free from foreign salts, we should have a ready method of detecting the presence of alum in bread.

It would be very desirable to have some compound, which, when added to bread, would render the presence of alum unequivocal, and which, at the same time, would be harmless to the health of the consumer.

EASY METHOD OF JUDGING OF THE GOODNESS OF BREAD-CORN, AND BREAD-FLOUR.

Millers judge of the goodness of bread corn by the quantity of bran which the grain produces.

Such grains as are full and plump, that have a bright and shining appearance, without any shrivelling and shrinking in the covering of the skin, are the best; for wrinkled grains have a greater quantity of skin, or bran, than such as are sound or plump.

Pastry-cooks and bakers judge of the goodness of flour in the manner in which it comports itself in kneading. The best kind of wheaten flour assumes, at the instant it is formed into paste by the addition of water, a very gluey, ductile, and elastic paste, easy to be kneaded, and which may be elongated, flattened, and drawn in every direction, without breaking.

For the following fact we are indebted to Mr. Hatchet.

"Grain which has been heated or burnt in the stack, may in the following manner be rendered fit for being made into bread:

"The wheat must be put into a vessel capable of holding at least three times the quantity, and the vessel filled with boiling water; the grain should then be occasionally stirred, and the hollow decayed grains, which float, may be removed. When the water has become cold, or in about half an hour, it is drawn off. Then since the corn with cold water, and, having completely drained it, spread it thinly on the floor of a kiln, and thus thoroughly dry it, stirring and turning it frequently during this part of the process."

MISCELLANEOUS.

LAW OF TRESPASS.

[From a Correspondent.]

Washington, Aug. 3, 1826.

MY DEAR SIR,

Pardon me for trespassing upon your time—but I would be much obliged to you if you have the means to inform me, whether there have been any decisions in Maryland, similar in principal, to what is laid down by Mr. Boyle, as the laws of trespass or damage feasant, and published in Vol. 6, American Farmer; the case he refers to, in the previous volume, does not appear clear.

My neighbour will not repair his fence betwixt my woods and his fields; my cattle go over his decayed pannels and he sues me for damages, and I fear he will recover, though I prove his fence to be not over three feet in height—and I am told that the old law of Maryland, 1715, is not applicable, and that decisions have been given to this effect, that every man must keep up his cattle, and that if they run upon another's land, though uninclosed, or with an insufficient fence, the owner of the cattle is liable to damages.

If decisions in Maryland have been given in conformity with Mr. Boyle's opinion, which appears the only true principle, the publication of one or more of them would have a good effect in saving expenses of litigation. If you have leisure pray let me hear from you.

Believe me,

Very truly, yours, &c.

CHARLES J. NOURSE.

[The above having been forwarded to Mr. Boyle, of Annapolis, with the request of the Editor of the American Farmer, to make some notes upon it; he has politely communicated the following; the subject being of great interest.]

cepting that the act of April, 1715, ch. 31, has not been acted upon. The juries have invariably set their faces against that act, for reasons which it would be difficult to explain. In some cases because they thought the Act of Assembly applied only to horses, and in others, because they were of opinion the fence for general purposes was too high. No decision has been made by the Court of Appeals on that act, mentioned in Mr. Nourse's letter. I have no hesitation in saying that the act will not extend to any beasts damage feasant, except "horses, mares, colts and geldings."

The law relating to beasts damage feasant, as mentioned in my letter, published in Vol. 6, p. 308, is the common law, and forms a part of the law of Maryland. The law of trespass is there fully laid down. No decision could be found upon this subject in Maryland, because the law was decided many years before the colonization of the province took place.

The whole of the difference of opinion takes place about the meaning of fences, and inclosed or uninclosed grounds. It never was designed by the Legislature, that a man should be compelled to enclose lands which he considered waste or common, though a division fence might be very important to his neighbour. In this state there are no regulations by statute, respecting fences, except the above mentioned act of 1715, which extends only to horses, &c. In other states there are many and various laws.

In New York, a law was passed on the 27th March, 1801, and a similar law some years afterwards, by which it is enacted that division fences between persons whose lands join, are to be made at the joint expense of both, except such persons shall choose to let their lands or meadows lay open and vacant. It is provided, that any person may throw open his land for common, on giving three more the notice. When beasts damage feasant have been distrained, the distrainer shall, within 24 hours, apply to the nearest fence viewers, to ascertain the damage—So much for New York.

In Massachusetts, an act for regulating fences, passed February 21, 1786, very much like that which New York subsequently passed.

In the different states various laws have been enacted very generally alike. I shall content myself with referring only to the civil code of Louisiana, which will immortalize its compiler, and stands unequalled, (except by its precursor, the code Napoleon,) and which enacts—"In the country the common boundary enclosure between two estates is made at their joint expense, if the estates are enclosed; otherwise the estate which is not enclosed, is not bound to contribute to it." This is, in fact, the pith of the whole affair. If a division fence has been kept up for years, both parties are bound to keep it in repair, unless one of them can make it appear that the fence is no longer of use to him. The common law upon this subject has never been adjudicated in Maryland, because it is an ancient law. A man is bound to keep his horses, &c. up or they may be impounded. The distrainer has no right to do any thing more than impound, or turn them out. (See the case of *Har & Johns Rep 220, Knot vs. Diggs*.)

On the 25th of August, 1826, the Court of Appeals, in the case of *Har & Johns Rep 220, Knot vs. Diggs*, decided that the law of 1715, ch. 31, applied only to horses, mares, colts and geldings.

The Court also decided that the law of 1715, ch. 31, applied only to horses, mares, colts and geldings, and that the law of 1715, ch. 31, applied only to horses, mares, colts and geldings.

SPORTING OILIO.



ANNALS OF THE TURF.—No. X.

(From the Petersburg Intelligencer.)

Dare Devil. Imported in the ship Rebecca, from London, in June, 1795; ran with great success at New Market several years, during which time he won 13 races out of 18 at that place, against the best horses of the day in England. He was a bay horse, foaled 1787, and bred by the Duke of Grafton, got by Magnet out of Hebe. Hebe by Chrysolite out of Proserpine, sister to Eclipse.

Dion. Was imported in the fall of 1801, by Col. Hoopes, of the Bolling-Green. He was bred by Mr. Garforth, of Yorkshire, and got by Spadille, (one of the best sons of Highflyer,) his dam Faith by Pacolet, his grandam the famous Atalanta by Matchem—Lass of the Mill by Oronoke—old Traveller—sister to Clarke's Lass of the Mill—Greyhound—Partner—Woodcock.

Driver, a beautiful bay, 5 feet 3 inches high, foaled 1794, and got by Lord Egremont's famous running horse Driver, his dam by Lord Ossory's celebrated running horse Dorimant—grandam by old King Herod—Shepherd's Crab—Miss Meredith by Cade, &c.

Druid, a chestnut, elegantly formed, near sixteen hands high, foaled 1792, and imported into Virginia in 1800; he was got by Pot8u's, (son of Eclipse,) his dam by King Herod—Matchem—Snap—Regulus—Bartlett's Childers—Honeywood's Arabian, &c.

Dungannon. Bay horse, imported by Col. Tayloe, 1779, was got by Dungannon, his dam by Conductor—Flirt by Squirrel—Helen by Blank—Crab out of old Partner's sister.

Fir-tail. Imported in 1801, by Cain & Ray, of North Carolina; bay horse, got by Phenomenon, out of Columbine by Espusikes—Babraham—Blank—Sterling—Lonsdale Arabian—Cypress Arabian—Crab's dam.

Gouty. A beautiful bay, five feet three inches high, foaled 1797, and imported into Virginia in 1806, was got by Sir Peter Teazle, his dam the famous yellow mare by Tandem—grandam Perdita by Herod—Fair Forester by Sloe—Forester—Partner—Croft's bay Barb—Makeless—Brimmer, &c.

Gabriel. Bay horse, bred by Lord Ossory; was got by Dorimant, his dam by Highflyer—Snap, &c. having won fifteen races, beating the best horses: imported in 1799.

Hambleton. A beautiful bright bay, near sixteen hands high, foaled 1791, and bred by the Duke of Grafton, was got by Dungannon, (one of the best sons of Eclipse,) his dam by Snap, grandam by Blank—Partner—Greyhound—Curwen's bay Barb, &c. Hambleton was imported into Virginia in the spring of 1803, by Mr. Lightfoot.

Herod. Grey horse, foaled 1792, and imported into Virginia in 1796. "He was got by young Herod, son of the famous old Herod, out of one of Lord Clermont's stud, a daughter of Conductor. In point of blood, Herod cannot be exceeded, being from the first running stock in England.

Jonah. Bay horse, imported into Virginia about the year 1803-4; he was foaled in 1795, and got by Escape, dam Lavender by Herod—Snap—Cade—Bloody Buttocks—Partner—Makeless—Brimmer—Place's white Turk.

Jack Andrews. Imported by Wm. Lightfoot, of Charles City county, Virginia; a blood bay, 15½ hands high, finely formed, and one of the most active and best bottomed horses ever imported into this country. He was got by Joe Andrews, (son of

Eclipse), his dam by Highflyer—Cardinal Puff—Tatler—Snip—Godolphin Arabian—Stanyan's Arabian, which mare was own sister to Frampton's Whiteneck, full sister to the Mixbury Galloway—Sauce Box, a son of Jigg, sire of Partner.

Knowsley. Bay horse, elegantly formed, foaled 1796, and imported into Virginia in 1802. He was bred by the Earl of Derby, and got by Sir Peter Teazle. His dam Capella by Herod—Regulus—Crab—Snake, &c.

Magic. Ch. horse, imported into North Carolina, was got by Volunteer, dam Marcella by Mambriño—Medea by Sweetbriar—Angelica by Snap—Regulus—Bartlett's Childers.

Mufli. Imported by John Tayloe, in 1801. He was bred by Mr. Mann, of Norwich, and was got by Fitz Herod, (one of the best sons of King Herod,) his dam by Infant, (son of the Godolphin Arabian,) grandam by Whittington, out of a full sister to Black-and-all-Black; 15 hands 1 inch high.

Phoenix. Imported by Thomas B. Hill, into North Carolina; a chestnut horse, bred by the Duke of Bedford, foaled 1798, got by Dragon, his dam Portia by Volunteer, grandam own sister to Styng, Florizel, &c. by King Herod.

Precipitate. Fifteen and an half hands high, a fine sorrel, handsomely marked, of large bone and great muscular strength and powers. This celebrated horse was bred by the Earl of Egremont, (and was full brother to his celebrated horse Gohanna, the best four mile horse of his day,) foaled in 1787; got by Mercury, dam by Herod, grandam by Matchem, out of Mr. Pratt's old Squirt mare. Imported into Virginia by Wm. Lightfoot, about the year 1804.

Restless. A dark brown near 16 hands high and a most elegant form. He was got by Sir J. L. Kaye's famous horse Phenomenon, his dam Mr. Coate's Duchess, one of the finest mares in England of her day; Duchess was got by Lesang, her dam Caliope (and is the dam of Orpheus, Captive, Omphale, &c.) by Slouch, her grandam by Oronoke out of an own sister to Clarke's Lass of the Mill.

Robin Redbreast. Was imported into Virginia about the year 1803 or 1804; was got by Sir Peter Teazle, his dam Wren by Woodpecker, out of Papillon by Snap, (the dam of Sir Peter Teazle.) Woodpecker by Herod—Sir Peter by Highflyer, and he by Herod. Robin Redbreast was bred considerably in and in, and partook in all his crosses of the best blood in England.

Seagull. Was imported about the year 1796, and was got by Woodpecker, his dam by Snap, &c.

Spread Eagle. Imported by J. Hoopes of the Bolling Green, was bred by Sir Frank Standish; and got by Volunteer, (one of the best sons of Eclipse,) his dam by Highflyer, grandam by Engineer—Cade—Lass of the Mill by old Traveller—Young Greyhound—Partner—Woodcock—Croft's bay Barb, &c. Eagle is full brother to Spread Eagle.

Sterling. Imported from London by J. Hoopes, about the year 1799; a beautiful bay, got by Volunteer, (one of the best sons of Eclipse,) his dam by Highflyer, his grandam by Young Cade—his great grandam Childerkin by Second, out of the dam of old Snap; she was got by Fox, her dam Gipse by bay Bolton—the Duke of Newcastle's Turk—Taffolet Barb—Place's white Turk—Natural Barb mare.

Strap. Bay horse, imported into North Carolina by Henry Cotten; he was got by Beninbrough, his dam by Highflyer—Tatler, &c.

Silver. A beautiful dapple grey, imported into Virginia about the year 1802; was got by Mercury, his dam by Herod, his grandam Young Hag by Skim, Crab, Childers, Basto, Byerly Turk, Leedes' Arabian.

St. Paul. A beautiful horse, remarkable for strength and bone; he was bred by the Prince of Wales and got by his horse Saltram, his dam Puri-

ty by Matchem, out of the old Squirt mare, the dam of twelve capital racers. St. Paul was imported into Virginia about the year 1804.

Saltram. A dark bay, 15 hands 3 inches high, was imported into Virginia by Mr. Lightfoot, of Charles City county, about 1799-1800. He was near 20 years of age when he came into Virginia; he was formerly the property of the Prince of Wales; and was got by Eclipse, his dam Virago by Snap, his grandam by Regulus, out of an own sister of Black-and-all-Black, sire of Tuting's Polly, &c.

Sir Harry. Was imported in the fall of 1804 from London, by Wm. Haxall, of Petersburg, Va. He was 15 hands 3 inches high, full of bone and muscle, fine points, elegant form, and beautiful brown colour. His stock was considered equal to any in the world; and he was one of the best racers in England, both for speed and bottom with very heavy weights, and probably cost more money than any other horse ever imported to this country, (standing the owner within a trifle of 1200l. sterling when landed,) and was, in the estimation of good judges, considered as equal if not superior to any horse that had been imported into Virginia. Sir Harry was got by Sir Peter Teazle, out of Matron by Alfred, grandam (dam of Pilot,) by Marsk—Regulus—Steady—Palmer—Greyhound—Makeless—Counsellor—Brimmer—Place's white Turk. Sir Harry was the sire of some distinguished racers in Virginia: among them were Sir Hal, Sir Alfred, Atalanta, and many others. The Sir Harry mares have been held in high estimation, as having produced valuable stock, particularly when crossed upon Sir Archy.

True Blue. Imported by Gov. James Turner, of N. Carolina, in 1803; bay horse, got by Walnut, (son of Highflyer,) his dam by King Fergus—Celia by Herod—Proserpine by Marsk, sister to Eclipse.

Tickle Toby. Brown horse, elegantly formed, 16 hands high; he was got by Alfred, (one of the best sons of old Matchem,) his dam Celia by Herod, out of Proserpine by Marsk, full sister to O'Kelly's Eclipse. Tickle Toby was the sire of the celebrated race horse Sir Solomon.

Whip. A beautiful brown horse, imported into Virginia in 1801, of great strength and size, being 15 hands 3 inches high; was got by Saltram, his dam by King Herod, grandam by Oronoke, great grandam by Cartouch, out of an Arabian mare.

Wrangler. Imported in 1802 from England; he is a fine bay, foaled 1795 and bred by Sir Thomas Charles Bunbury, and got by old Diomed, his dam Sir Charles Sedley's famous mare Fleacatcher by Godolphin, grandam by Squirrel, great grandam by Ball, out of a full sister to Snip by Flying Childers. Fleacatcher was decidedly the best mare of her day; she is the grandam of Col. Hoopes' Lady Bull.

Wonder. Imported in the fall of 1803, dark chestnut, 15 hands 3 inches high, full of bone and very handsome; foaled in 1795, and got by Phenomenon out of brown Fanny by old Diomed; grandam by Marsk—Skim—Crab—Childers—Basto—&c.

N. B. While on the subject of pedigrees I shall here take the occasion to remark, that it is my impression there is an error in the pedigree of Col. Eppes' grey mare, the dam of Pacolet, Little Wonder and Palafox. She is represented to be by Tippoo Saib, and he by Lindsey's Arabian. There were two horses of this name. Tippoo Saib out of Meade's Aristotle mare, (the dam of Celer,) and a grey horse called Tippoo Saib, bred north of Virginia and got by Lath, (an account of whom was given in the 9th No.) There is no doubt but the latter Tippoo Saib got Meade's mare. The matter, however, is left open to investigation; but my information is derived from two different sources.

I cannot close this number on the subject of pedigrees without an attempt towards establishing the blood of a very celebrated stock of running horses

in Virginia, viz: Ratler, Childers, Sumpter and Flirtilla. My informant, the only correct authority on the subject, traced their pedigree to an imported Cub mare, and all my researches have enabled me to find but one imported mare of this blood, and she was owned to the north, which agrees with the information of my informant. The celebrated running mare Flirtilla (with her three full brothers above named,) was got by Sir Archy; her dam (bred by Thomas Goode, of Chesterfield county, Va., by the imported Robin Redbreast, grandam by the imported horse Obscurity, g. grandam by the imported horse Wildair out of an imported Cub mare. This mare was by Cub, a son of old Fox, her dam by Torismond, son of the Bolton Starling, her grandam by Second, brother to Snip, her g. grandam by Mogul, brother to Babraham, her g. g. grandam by Sweepstakes—Bay Bolton—Curwen bay Barb—Curwen's old Spot—white legged Lowther Barb—old Vintner mare.

Wildair stood to the North, and his blood was held in such high estimation, that at 18 years of age, he was bought up and sent back to England. The Wildair mare, in the above pedigree, was brought to Virginia and purchased by Thos. Goode.

AN ADVOCATE FOR THE TURF.

(To be continued.)

RECIPES.

TO PREVENT SEA SICKNESS.

Drop a few drops of vitriolic æther upon loaf sugar, and let it dissolve in your mouth; or drink a few drops of æther, added to a solution of sugar, in water, to prevent its immediate evaporation.

A RECEIPT FOR A COUGH.

Take a glass of spring water and put into it a spoonful of the syrup of horehound, and mix with it nine or ten drops of the spirit of sulphur.

TO PREVENT INK FROM MOULDING.

Half a dozen cloves, bruised with gum-arabic, are to be put into the bottle. If a very fine ink is wanted, white wine, or vinegar and water, should be used instead of water alone.

CORNS AND WARTS.

Apply soft brown paper moistened with spittle. A few dressings will remove them.

AGAINST BURNS OR SCALDS.

Plunge the part scalded into cold water as soon as possible. Wet it with linen steeped in rectified spirits or common brandy. Poultices and oily applications are to be avoided.

CHAPPED OR SORE LIPS.

May be healed by the frequent application of honey-water, and protecting them from the influence of cold air.

THE FARMER

BY J. B. BUELL.

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LARGE SQUASH.

DEAR SIR, Chambersburg, Aug. 17, 1826.

Mr. Gough has been good enough to take charge of a cymlin or squash, as we call them in Pennsylvania, of a peculiar excellence. It grew at the foot of the Allegany mountains. It is a great bearer, and the vines from which this was pulled had on them a large number of equal size. It may be best eaten from 2 to 12 lbs. weight. The present one weighed 19 lbs. After satisfying your curiosity, you can open it, and distribute the seed as you may deem most beneficial for the purpose of its propagation. As I am going round by Lancaster, I wished to send it on to you immediately, which the politeness of Mr. Gough has enabled me to do. On my return to Baltimore, I shall give you a more particular account of it.

Respectfully, yours, &c.

J. S. SKINNER, Esq.

CHARLES SMITH.

TO GARDENERS.

A gardener, of good character, who can bring unquestionable recommendations for capability, industry, and sobriety, will hear of a desirable situation by applying immediately to the Editor.

Aug. 25.

SEED WHEAT.

The subscribers, have just received from Col. E. Lloyd and Tench Tilghman, of Talbot county, Md. the following kinds of Wheat, viz:

Early Ran Ripe, a white wheat, ripened the 8th of June, last harvest, on stiff land; the grain is very white and is said to possess some valuable qualities.

Virginia White, from which the best bakers' bread is made; and *White Flint Wheat*, Red-chaff Bearded, Lawler, and Blue-stemmed Wheat will also be kept for sale.

In Store,

Seed Rye, and Grass and Garden Seeds.

We have now ready to deliver three *Cotton Gins* with steel saws, two of forty and one with thirty saws; and can have them made to order of other sizes, at a short notice; and those now made are said by judges to be on the most approved plan, and will be sold on as reasonable terms as they can be purchased in any part of our country.

PLUGHS.

On hand, a large assortment of Bar-share, Woods', Improved Cary, and Winan's Self-sharpening Point Plough of all sizes, with or without coulters; this plough is so constructed as to require little or no smithing to keep them in repair, and does the work equal to any plough now in use. We have been trying these ploughs about a year, and we are now fully satisfied that they only require to be known to bring them into general use.

Improved Wheat Fan.

After three years experience, we think we have made many important improvements in this article, which now gives general satisfaction; many certificates to that effect may be obtained from those who have lately purchased them.

August 25, 1826.

SINCLAIR & MOORE.

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For a sickness, Cure for a Cough, To prevent the loss of seed, To cure Corns and Warts, &c.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	5	9	9	12
BEES-WAX, Am. yellow	—	30	32		50
COFFEE, Java,	—	16	17½	20	22
Havana,	—	15½	16½		20
COTTON, Louisiana, &c.	—	13	14		
Georgia Upland, . . .	—	11			
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	14	16	18
Dipt,	—	11			14
CHEESE,	—	9	10	12	15
FEATHERS, Live, . . .	—	30		37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	7 00			
FLAXSEED, Rough, . .	bush	75	80		
FLOUR, Superfine, city,	bbl.	4 25	4 37	4 50	4 75
Fine,	—	4 00			
Susquehanna, superfi.	—	4 00			
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	65			
white	—	67	70		
Wheat, Family Flour,	—	85	95		
do. Lawler, & Red, new	—	75	80		
do. Red, Susque. . .	—	80	83		
Rye,	—	60	65		
Barley,	—	80	1 00		
Clover Seed, Red . . .	bush	3 87½	4 25	4 75	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed, .	bush	1 75		2 00	scarce
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	2 25		3 00	
Oats,	—	31	33		
Beans, White,	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS,	lb.	12		25	
HOGS' LARD,	—	7	9	12	
LEAD, Pig	lb.	6½			
Bar	—	7½	8		
LEATHER, Soal, best,	—	22	23	32	
MOLASSES, sugar-house	gal.	46		62½	75
Havana, 1st qual. . .	—	32		37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27		40	
Spermaceti, winter .	—	70	75	88	
PORK, Baltimore Mess,	bbl	11 00	11 50		
do. Prime,	—	8 50			
PLASTER, cargo price,	ton.	4 00			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	6½	7½	8	12
WHISKEY, 1st proof, .	gal.	32	34	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	34	35	50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	8 50	9 25		
Louisiana,	—	8 00	9 75	10	11
Loaf,	lb.	19	22	20	
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	
Pepper,	—	16½		25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	42		75	
SHOT, Balt. all sizes, .	c. lb.	9 00		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	
do. Sicily,	—	1 15	1 20	1 50	
Lisbon,	—	1 15	1 20	1 50	
Claret,	doz.	4	8	5 00	
Port, first quality, . .	gal.	1 65	1 85		
WOOL, Merino, full b'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	15	20		
Skinner's or Pulled, .	—	20	25		

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AGRICULTURE.

MULES.

DEAR SIR,

Forsyth, (Geo.), July 29, 1826.

Since I wrote you last, I have conversed with many practical farmers, and corresponded with some upon the subject of using mules on farms, and in teams, in preference to horses; and they uniformly agree with me in saying that mules are far preferable to horses, more especially where they are managed by negroes.

It is not my intention, nor is it in my power, here to write you a learned essay upon the natural history of mules, for I live where we have no books upon such subjects; but I will try and furnish you with some facts which may be of some service in a section of the Union where mules are not worked extensively, unless introduced within a year past. I prefer mules to horses, for the five following reasons:

1. It is less expense to breed them;
2. They live much longer;
3. They are easier kept;
4. They are more serviceable;
5. They are less liable to disease than horses.

First. It is less expense to breed them, because they are much more hardy than horses, and will subsist upon almost any kind of coarse food—such as shucks, hay, pea vines, oats, straw, &c. in the winter; and in the summer they require nothing but grass. This is not the case with young horses, for they require considerable attention.

Secondly. They live much longer than horses. I believe you may safely set down a mule at 30 years service; you may commence working them at three years old, and they generally live from 30 to 40 years; whereas, you commence working a horse at four years old, and the average of them live about 12 years, leaving you eight years service, which is about one fourth the service of a mule. It is true, some horses live much longer, say to 25 years—but more mules arrive at 30 than horses at 12, and some live to a much greater age. I have heard of their being worked at 50 years of age, and I know some serviceable mules that are 40 years old.

Thirdly. They are easier kept. Mules, when in service, require about three-fourths of the food that is necessary for a horse; but on farms they are generally idle from one-third to one-half their time, when they are scarcely any expense, being as easily kept as cattle; which is not the case with horses, for they require almost as much food during the winter months when idle, as when at work. In this state, where we feed almost entirely upon corn, mules will do good work upon fifteen or eighteen ears of corn per day, while horses require from twenty-five to thirty, and will eat more if given them.

Fourthly. They are more serviceable than horses, especially in the summer. We usually commence ploughing here in February, (taking care of the cotton crops preventing our ploughing in the fall,) and get done about the middle of this month, (July,) and the hot weather frequently sets in as early as the 1st of May; consequently we have two months, and sometimes more, of hot weather, during the ploughing season; and there are but few horses that keep in good order the whole season, if worked constantly; yet you may plough a mule, or work him any where you please the year round, and he will not fall off a pound, if well fed. I have heard some persons complain that they did not walk fast enough—but it is an easy matter to train them to walk as fast as horses. I have observed that they endure rainy and cold weather better than horses. They are much used here in teams; they carry the same drafts that horses do and travel as far in a day, and always look better.

Fifthly. They are less liable to disease than horses. I have been in the habit of observing

mules ever since I was a boy, and I never saw one sick; nor have I ever seen one foundered, nor have I ever seen a dead one. I believe they seldom die but from old age, and we have not been using them long enough for many to have died in that way. I do not believe they are subject to the distemper, glanders, staggers, or any of the common complaints of horses. In giving mules so decided a preference to horses, you must understand me to mean mules of a good size, say 4 feet 8 inches to 5 feet high.

The best mules we have are either bred here, or brought from Kentucky. I have seen Georgia, S. Carolina and Kentucky mules 5 feet 2 inches, and heavy in proportion. Mules of this description are very valuable, selling as high as \$200. Some of the finest I have seen were said to have been bred by General Hampton, who, I learn, greatly prefers them to horses on his farm. We formerly obtained our mules from the Spanish provinces beyond the Mississippi, and from Atacapa and Apalouza; but they were generally small, in consequence of being bred from small wild mares, and fed entirely upon grass, in the great western prairies—the usual cost of them where bred being about a doubloon per head. Small Spanish mules sell here, unbroke, for \$50 to \$75; those brought from Kentucky, being generally larger, sell for \$65 to \$85. It has been asserted that they do best in cold climates, but I think the assertion unfounded.

The best European mules are those bred in Spain and Savoy. In Savoy they are much used, especially for transporting persons and baggage across the mountains; and they are much used in Spain for the same purpose. Many of the Spanish grandees drive them, and I learn that it is a very common thing to see them in carriages upon the Prado in Madrid. I believe they are much used in all the South American States and in Mexico; and they are much used in the West Indies. The ancient Romans drove them in their carriages, in making their triumphal entries. I have frequently seen them drove in handsome carriages in this state.

I will close this long letter with a few remarks upon the manner of rearing good mules. You should first get a large well formed Jack, and then get the largest, finest mares you can, for the size and colour of your mules will depend much upon your mares, the mule receiving its size principally from the mare, and its form from the Jack. They should be tolerably well attended to when colts, but should not be bred delicately, merely giving them sufficient food to make them of a good size. A friend of mine (Mr. Cowper, of St. Simon's,) prefers for winter and spring labour, oxen, to either mules or horses, and he thinks they might be used advantageously through the summer. He breaks them at four years old, works them 5 or 6 years, then fattens and kills them. He feeds them upon cotton seed, boiled and mixed with corn or peas, two parts of cotton seed to one of corn or peas. Upon this food, and rice straw, they keep fat. And there is a considerable saving in working oxen; they require no harness, save the yoke and chain, which saves considerable on a farm worked with slaves, for they will destroy a set of harness every year.

Mr. Cowper prefers either mules or oxen to horses—and says that a planter has no business with horses on his farm.

MANSFIELD TORRANCE.

CLIMATE OF FLORIDA.

Benvenue on Lochachray, near Tallahassee, }
July 27, 1826. }

J. S. SKINNER, Esq.,

Sir,—I have perused an article in the American Farmer of the 18th of May last, on the subject of the difference of the climate and advancement of

the seasons in the state of Alabama. No doubt a few details on the above, or indeed any agricultural subject connected with this peculiarly romantic and fertile region, would be interesting to you.

Our peach trees blossomed on the first of February. These are all of the late kind, and, generally, with few exceptions, such as were found in the "Indian old fields." If we had the early June peach of Maryland, we should have ripe peaches in the month of April, or May at the latest. Green corn and musk melons were eaten in April, about the middle of the month. The green corn dance of the aborigines of Florida, generally took place about the time of the new moon in May.

Our fig trees produce three crops in each year. The first commences about the 20th of June; and, singular to relate, while one crop is verging to maturity, the new ones are seen protruding themselves (for they have no blossoms,) from the unoccupied branches of the tree; and so on for three successive crops during the summer, or rather until frost, which sometimes makes its appearance for a few days in January, and sometimes not at all through the winter season. This probably is owing to our vicinity to the gulph stream. We are in latitude 30° 20'. Wheat has already been raised in this vicinity on our poorest land, twenty bushels to the acre. I ate of the bread (not very fair, but sweet and fine flavoured,) made from the same on the 22d of April. It had been harvested on the 10th of the same month.

Colonel Murat, last fall, introduced a superior species of Italian wheat, and distributed small parcels to every planter who wished to make a trial of it. It is very productive, one single grain having in one instance produced forty-three stalks.

When I was a boy, I recollect to have heard an old farmer state in my hearing, that he always succeeded in preventing the weevil from injuring his wheat, by keeping it in tight bins made of sassafras wood.* I presume the strong odour emitted from this species of wood, to be the cause of their absence. Would not red cedar have the same effect? Bugs are known never to infest red cedar bedsteads. Wheat is less liable to injury from weevil, or other insects, when kept in the sheaf.

It strikes me, however, upon recurring to the rationale of the principle, that as the weevil is inherent in, and generates in the grain itself, a course of sweating, or exposure to the sun, for a few successive times, of the wheat; and a subsequent deposit in tight casks covered over with a thin coat of lime to exclude the atmosphere, would effectually prevent this noxious vermin from pursuing his depredating ravages on this important staple of our country.

I could give you a Flemish account of the different articles of produce; the seasons, climate, &c. of this new and growing country; but I took up the pen merely to inform the gentleman of Alabama, through the medium of your valuable paper, of a specific, that "would lighten the labour and cheer the heart of many an honest farmer," his country's "stay, in peace or war."

I am, very respectfully,
ONE OF YOUR SUBSCRIBERS.

ON RECLAIMING MARSH LAND.

By R. G. JOHNSON.

(From the Memoirs of the Philadelphia Agric. Society.)
Salem, N. J., Feb. 10, 1819.

Being disposed to submit my observations and experience in practical agriculture, for a period of twenty-eight years past, to the perusal of the read-

[* It is known that vermin are kept from poultry-houses by making their roosts, nests, &c. of this wood.
ED. AM. FARMER.]

ers of the "Memoirs of the Philadelphia Society for promoting Agriculture," I shall be sufficiently gratified should any thing be gleaned from what I have written, which may tend to throw some light upon a subject connected with rural economy, and which, in some parts of our country, is but imperfectly understood: I mean the reclaiming and bringing into a dry and profitable state, the numerous wild marshes, which line our bay, river, and creeks.

The wild marshes are made from the sediment carried on them by the flowing of the tides, and deposited among the different species of wild grass, which every season spring up, and in the autumn decay, and then become incorporated with the sediment of the preceding year, mixing with the various putrescent animal and vegetable substances of which the quagmire is composed. From this mass is produced a soil, which, when brought into good cultivation, continues its extraordinary fertility for many years. I have observed, that on such marshes, the line of distinction may be easily traced by the effects of the salt, and then brackish water, upon the numerous species of aquatic plants which grow thereon. As far up the Delaware as Reedy island, grow two species of salt grass—the rosemary salt-sedge, and the red salt-sedge, and two species of reeds; from thence, to about the mouth of the Christiana creek, or Deep-water point, grow the three square, the two kinds of reeds, and fresh rosemary; and from thence up the river, (the water being fresh,) grow the bull rush, three square, only one kind of reed, wild oats, flags or cat-tails, fox-tail, spatter dock, and the water lily. For bringing into cultivation such unproductive marshes, the universal practice throughout our county (until a few years ago,) was, to dig a ditch parallel, and about six feet distant from the footing of the intended bank, and from that to make a bank of such form and size as accorded with the judgment of the owner. After the bank had stood a year or two, it became apparent that it had not only settled, but that the foundation had inclined towards the large ditch. To keep up the bank to its proper height, it was then thought necessary to dig a ditch about ten or twelve feet in the inside, and pack that on the bank; but even this method did not permanently remedy the defect. The evil of such proceedings was apparent, because the foundation could never be made sufficiently firm to support so great a quantity of mud, without settling so low as to admit the tide overflowing the same, unless frequent additions of fresh mud from time to time were made to keep it up to its former height; and even then the expense and difficulty have been increased, in consequence of the scarcity of mud, both within and outside of the bank, and of the great pressure of mud forcing the foundation into the ditches. Another very serious evil was, that these ditches afforded an easy and safe passage for the muskrats and fiddlers to enter at all parts of the bank, and thus admit the water, so as frequently to break it.

TIDE BANK.

In the present improved method of reclaiming wild marsh from the tide, the first thing to be done is, to stake out the site for the intended bank, at such a suitable distance from the margin of the river or creek (as the case may be,) as to allow a sufficient space for a guard against the swells of the water in stormy weather, and for the preparation of mud, to make and keep in repair, at a distance not nearer than four rods from said bank. Should the marsh be composed of a mat of sedges or reed-roots, (as a preparation for the intended bank,) the labourers should remove one spit deep of the roots, and lay them aside to be packed on the bank when nearly finished.

The trenches from whence the mud is to be are to be served in the same manner, because

such hard sods can never be sufficiently packed, but that they will admit the water. The surface being now removed, they will proceed to cut and wheel the good mud into the bed designed for the bank. To do this properly, it will be necessary that the labourers should be apportioned to the different parts of the intended bank in separate gangs, as the work will then be carried on to the best advantage, not only to themselves, but their employers. A gang is composed of five hands, two to cut and load the wheelbarrows with mud, two to wheel it to the bank, and one to be there stationary as a packer. The business of a packer is to lay out the bank, pack every sod of mud that is delivered to him by the wheelers, and attend strictly to the carrying up the bank, in its true proportion and proper height; he is also to assist in making the gangways to run the wheelbarrows on. As to the size of the bank, the owner must be governed entirely by circumstances; if his marsh is situated upon a water subject to freshets, which swell the tides beyond their ordinary level, or, is of a spongy or miry bottom; or, if lying on a losing shore, or subject to be beaten on by particular stormy winds, which raise the tides; in any of these cases he must build and fortify his bank accordingly; but if free from those liabilities, and his marsh high and of a firm olue mud stratum, in that case, I should suppose a bank of twelve feet base by six feet in height, would be sufficient: but I would observe, that I have never seen a bank too large. Let the bank be of what size the owner may choose, I have always considered that the base should be double the width to the height, and as to the sides or slope, they should be at or about an angle of fifty degrees, and the breadth at the top of the bank about one-sixth of the base. To wheel mud on a miry marsh, it is necessary the men should have boards to lay upon the mud, but in wheeling their barrows to the top of the bank (which would be an elevation of six feet,) they must have plank of not less than thirty feet long, though the longer they are the better, provided the men can handle them, and they should be not less than four inches thick. To support the plank in the middle, they should have several light posts with holes morticed in them, through which a rail or pole is temporarily inserted, so as to bear it with the weight of mud passing over, and also to prevent it from swagging; these posts will be removed, and the wheeling or gang-plank, as it is called, must be removed several times before the labourers complete a single rood.

SLUICE.

The bank being finished, a suitable place must be selected for laying a sluice, which should be several rods distant from the creek or river, into which it is to discharge the water from the marsh. In the preparation for the intended bed of the sluice, the water course should be begun from the margin of the river or creek, and its depth continued at about the ordinary low water mark, until the bed of the sluice is cleared, when the digging should be suspended until the sluice is bedded and finished. The mud on each side of the intended bed, should be removed a reasonable distance, lest, when piling for the sluice, any sudden jar might cause the sides to cave in, and thus fill up the bed. After the bed is dug, four stakes, having lines fastened to them, are to be drawn taught, and stuck into the mud exactly on the bottom, where the sluice is to be laid, but within the breadth of the sluice by about two inches; for example, should the sluice be four feet wide, then set down those stakes at the distance of three feet nine or ten inches apart. In the meantime some person should be in readiness with the pilings. These pilings are made from inch boards (no matter of what wood, for in the mud they never rot,) sawed off, to the length of about three feet, and are to be sharpened; this is done by a person

cutting and sloping away both sides of one end of the board alike, and by cutting off three or four inches of one of the corners, at an angle of about forty degrees. These pilings being set by the lines, are driven down to a level with the bottom by a maul or tip, beginning at one end, and so proceeding on, until both sides are completed, and by crossing the bed in several places and immediately under the in and out end of the sluice, always remembering that the piling be put down with that edge having the point cut off furthest from the board last driven; so that in forcing it down, by the time it will be brought to a level with the one preceding, it will be drawn perfectly tight against it. Should the sluice be made of two or three funnels or divisions, you must drive as many rows of pilings as there are divisions of plank. If the mud is good where the sluice is laid, by piling in this manner, it can never settle, and no muskrat or mink, can ever undermine it. The piling lengthways and across being completed, and the lines removed, four poles eight or ten feet long, are to be set down by the four corners of the pilings as marks to direct the workmen to the exact place into which they are to float the sluice, and excite their attention to those parts as it settles on the ebbing of the tide. When the sluice shall have grounded on the pilings, one of the workmen is to examine if it has rightly bedded, and if so, they will then proceed and cover it up with the best mud, care being now taken that a trusty packer be stationed there, to pack every spit of mud as it is delivered to him. It will now be necessary to lay two logs across and resting upon the front and in-ends of the sluice, with their ends bedded in the solid marsh, so as to prevent the mud as it is packed on the sluice from slipping out, and to prevent muskrats and other vermin from burrowing at or near its sides. It will also be necessary to have inch boards sawed to about six or eight feet in length, to be pointed and sharpened in the same manner as directed for the pilings. The labourer standing sideways to the log, with his face towards the sluice, must set the edge of the board against the sluice, and perpendicularly against the log with the cut off corner of the board next to himself; two other men must have a two inch plank in readiness, and while one of the ends rests on the mud, the other is placed by the man attending the piling, on the top of it, who are to hold it steady while the two men walk on the plank until they come over the piling, when, by raising and sinking themselves, they force it down with great facility. This method is continued until these logs are piled from end to end. It must now be obvious even to a person unacquainted with such business, that if a sluice be laid and secured in this manner, nothing can injure it. For three feet under low water mark, it cannot be undermined, being, as it were, a tight board fence, and for more than half-tide up, an equally impenetrable barrier against any kind of vermin.

The duration of a sluice of good materials, and well laid, may reasonably be computed at thirty years. From my own observation, I am decidedly of opinion, that sluices should always be preferred to flood gates. My objections to a flood gate are, 1st. Because the cost is more than double that of a sluice. 2d. A flood gate, on the average, will not last more than from ten to twelve years; while a sluice will last from twenty to thirty years. 3d. A flood gate is frequently out of repair; from the construction of a sluice, it can seldom want any thing done to it, and when necessary, it is easily repaired. 4th. Should a muskrat work a hole under the flood gates, and they blow out, they are good for nothing. Should a sluice blow out, we have only to make a counter dam, and relay it on the same bed, or dig another close to the one on which it before rested, and there lay it. The sluice is just as good as before the blow out. These are my reasons for giving the preference to the sluice.

DESCRIPTION OF A SLUICE.

A sluice is a trunk on an enlarged scale, for the constructing of which the usual way among farmers is to cut down a large tree, and by reducing its sides to the thickness of from ten to twelve inches, it is hoisted up, and slit through by a whip-saw, which forms the two side planks for the sluice, each being about eighteen or twenty inches broad, and in length from thirty-five to forty-five feet. These planks are then set up to the width intended for the sluice, (usually about four feet,) and covered over with good two-inch plank, well secured with inch wooden pins. The door is made of two inch plank also, and hung within these side-planks about six feet from the mouth. The method of hanging the door is, by pinning two pieces of scantling, three by five or six inches, to it; and a like piece upon the top of the sluice over the side plank, and through these four pieces of scantling to bore a two-inch hole, through which is passed a good wooden pin or iron bolt, to hold the door securely, and permit it to open and shut easily. The advantage of hanging the door a little within the sluice, is, to prevent its being injured by the ice, or by pieces of floating timber, and by admitting the discharge of the water more freely from it; for in leaving the sluice it glides away in a smooth current; whereas, if the door was hung at the mouth, the water would pitch down and wear a deep hole immediately on its leaving the mouth. If it should be thought necessary to have a large sluice, say six, eight, or ten feet wide, the division plank must be increased to the number of intended funnels: thus, if there are to be three funnels, then there must be two division planks, and so on.

FLOOD GATE.

The flood gate is constructed of sills, ties, caps, posts, and studs, all morticed and tenanted into each other, in the same manner as any ordinary frame building, by having its bottom planked tight, and its sides boarded up, with its door or doors hung to the posts, in the same manner as a common stable door. Now it must be obvious to any person, that so much wood work, exposed to the alternate operation of wet and dry, must, in a few years, give way; while the sluice which has been well laid, and is never dry, will, of course, resist the effects of decay for very many years.

(To be continued.)

ON THE CHOICE AND PROPERTIES OF WOOL.

(From Partridge's Treatise on Dyeing.)

The wool used in this country is either of American growth, or imported from Spain and Portugal. The Portuguese wool is not in much repute any where, it is a wiry, harsh, foul wool, and with few exceptions very unfit to be used for any thing like superfine cloth. Since Saxony wool has been used in England, the Spanish has sunk so much in reputation as to be seldom employed in making prime or even secondary superfines. Take two lots of wool, one of Saxony, the other of Spanish, of similar quality, and the cloth made from the Saxony will be very superior to that made from the Spanish; the former will have a much finer face, will handle better, and sell at a higher price.

The wool imported into this country from Spain is generally of an inferior quality for the marks: indeed I have seldom seen a good sample of single R here, and nothing less than a prime wool of that mark, ought to be used for superfines. That which is made from prime single R for chain, and good double R for filling, would be worth, if well manufactured, from six to seven dollars per yard.

Spanish wool, as mentioned in the Statesman of the last year, is sorted and scoured soon after it is sheared, and is seldom used in less than twelve months afterwards, and many lots lay two and three

years before it is manufactured. Those who are at all acquainted with the properties of wool, must know, that the staple will be gradually injured after it has been scoured: it will become harsh, and brittle by age, so much so, as never to recover that fine elastic property, in which its value principally consists. It is true that when closely packed as Spanish wool is, it is not injured so rapidly as when left open; yet that it is injured by age is well known to every experienced wool dealer and manufacturer.

The full blooded wool of this country bears a strong resemblance to the Saxony, and I have seen small lots offered for sale, the first quality of which ought to have made cloth worth ten dollars a yard; but I am informed that the fleeces do not contain as great a proportion of fine wool as the Saxony.

To improve the quality of a flock, it is necessary to examine the lambs when their wool is a little grown, and if any are found having coarse fleeces, they should either be sold, or sent off to an inferior flock; but should the increase be permitted to go on without separating those having inferior fleeces, the quality of the wool will degenerate rather than improve. It costs no more to feed a fine fleeced animal than it does a coarse one; and those agriculturists who raise sheep with a view to profit, would certainly find their account, in obtaining by means so easy, a flock whose annual fleece would be worth thirty per cent. more, than when raised after the common careless manner.

It is not many years since fine wool was exported from Germany, and I have understood that they first obtained their sheep from Spain during the late continental war, and about the same period, they found their way to New South Wales and America. Germany and New South Wales are now supplying Europe with much finer wool than can be obtained from Spain, whilst America raises very little that is equal to the best of the second quality Spanish.—There must be some radical defect among the wool growers of this country that loudly demands to be remedied.

Our manufactures are now arrived to that state in quality and magnitude, which makes it advantageous for each one to confine himself to the making of one or two qualities of cloth. By pursuing this mode, perfection would be obtained much sooner than by following too great a range. A factory that is put into operation, with a view to the making of fine goods, must be injured, and rendered unfit for that purpose, by manufacturing those of a quality very inferior. It is also very inconvenient, as the mode of working in every department must be different, and the manager must be continually making new calculations to regulate the work.

To give manufacturers an opportunity of working only one or two qualities, it is necessary they should be able, at all times, to purchase a supply of wool of such as are wanted; otherwise, their factories must sometimes stand still, and this state of things would be worse than the former. I believe it is difficult at this time to obtain a supply of one or two qualities. When American wool is purchased, they have to take it in the fleece, and to work up all the qualities: now it is evident to every one conversant with this manufacture, that those cards which are calculated for choice locks, and the reeds and harness that are made for such work, are not fit for working the coarsest grades, and vice versa.

In order to obviate these difficulties, it would be desirable to have the fleeces stapled by dealers in wool, so as to enable manufacturers to purchase the qualities they may want; but the principal thing wanted is extensive capitals, vested in the wool trade, to purchase domestic and foreign wool of every quality, and in sufficient quantity to supply the market. Agents, who are judges of the article, should be employed in Spain and Germany, to make such purchases as the present and increasing demand may require.

It is to be regretted that it should be necessary to resort to importation for the supply of an article that might be raised to any extent in this country, and which, while it improves the land, affords a good profit to the agriculturist; nor would this necessity be of long continuance, provided the farmers would generally turn their attention to the merino breed, and take the same pains to obtain fine fleeced animals, as is done by the Spaniards and Germans. At the present time, the factories are increasing more rapidly than the flocks; but so soon as the former shall have acquired their maximum, the latter will continue to increase until it be in excess.

To possess a good judgment in wool, requires more practical skill than manufacturers are generally aware of. An English clothier who is known to have a correct and discriminating judgment in this article, is often employed by others to purchase their wool, for which he is allowed a small commission. So trifling are the profits in that country, that unless the wool is well bought, the cloth will afford none; and though the profits are much larger here, yet the success of a manufacturer must depend in a great measure on having a good judgment in purchasing the raw material. I do not profess to have a perfect knowledge of wool, and if I had, it would be impossible to give such written instructions as would convey it to others, I will endeavour, however, to point out some of its leading features.

It will be understood that perfect wool is flattish rather than round; that when round, it approaches nearer to the properties of hair than of wool; that when of a proper shape it is finer as it is thinner and smaller; that when fine and good, it will have a crimped appearance, which makes it look shorter than it really is; that it will have a glossy surface, somewhat resembling silk; and that when stretched out, it will be sufficiently elastic to return to its former position, like a steel spring, as soon as the stretching power is removed. When a lock of wool is placed close to the ear, and there gently drawn out, it will make a crackling noise; and some judgment may be formed of its quality by the noise it makes—all wool will give it more or less, but the finest will make less noise than that which is coarser. When the fingers are drawn from the roots to the points of wool, no sensible resistance is felt; when drawn from the points to the roots, the resistance is very sensible, but less so as the quality is finer.

It must be evident that it will require considerable practice to become expert even to the extent of these few instructions, and much more must be acquired before a correct judgment can be formed.—It is difficult in all small articles, where there is a great range in grade and quality, to be able to discriminate between two samples nearly alike, and this can be acquired only by practice. Those managers who are desirous of improving the quality of their cloth, and to make large profits, must take every opportunity of comparing different samples and remarking the result when made up with their judgment before hand; by these means they will be able in two or three years to discriminate accurately between the relative value of samples that may be offered for sale. Many English manufacturers employ a small pocket microscope to examine the samples of wool before purchasing; and it is said the quality can be better ascertained in this way, than with the naked eye.

In purchasing of wool it is not only necessary to attend to the quality, but also to its condition. Spanish wool is partly scoured before it is exported, but some lots are scoured much cleaner than others, and it will be necessary for the purchaser to ascertain how much will be the probable loss on the different samples. Besides this defect, Spanish wool is often very badly sorted, and left with all the burrs and pitch marks remaining in it. This wool loses from 10 to 18 per cent. in scouring.

Saxony wool is offered for sale as it comes from the sheep's back, having been merely washed before shearing, and is afterwards sorted, yet some samples are much fouler than others—the average loss by clean scouring is about thirty per cent: at least this is the per centage allowed by the manufacturers when they send their wool to be dyed—for every hundred pounds of Saxony wool sent to the dyer, they expect to have seventy pounds of clean wool returned. American merino wool, unwashed before shearing, will lose from forty to fifty per cent. I once had two fleeces of unwashed wool scoured, from sheep that had been feeding on sandy land, one of them lost fifty-six, and the other fifty-eight per cent. The finer the quality of the fleece, the more it will lose in scouring, because fine full blooded wool has more yolk in it than that which is of inferior quality. American wool that has been washed clean before shearing, will lose from 25 to 30 per cent.

HORTICULTURE.

SCIENCE OF GARDENING.

(From Loudon's Encyclopedia of Gardening.)

FUNCTIONS OF VEGETABLES.

Food of the vegetating Plant.

Earths.—As most plants have been found by analysis to contain a portion of alkaline or earthy salts, so most plants have been found to contain also a portion of earths: and as the two substances are so nearly related, and so foreign in their character to vegetable substances in general, the same inquiry has consequently been made with regard to their origin. Whence are the earths derived that have been found to exist in plants? Chiefly from the soil. But in what peculiar state of combination do they enter the vessels of the plant? The state most likely to facilitate their absorption is that of their solution in water, in which all the earths hitherto found in plants are known to be in a slight degree soluble. If it be said that the proportion in which they are soluble is so very small that it scarcely deserves to be taken into the account, it is to be recollected that the quantity of water absorbed by the plant is great, while that of the earth necessary to its health is but little, so that it may easily be acquired in the progress of vegetation. Such is the manner in which their absorption seems practicable: and Woodward's experiments afford a presumption that they are actually absorbed by the root. The proportion of earths contained in the ashes of vegetables depends upon the nature of the soil in which they grow. The ashes of the leaves of the *Rhododendron ferrugineum*, growing on Mount Jura, a calcareous mountain, yielded 43.25 parts of earthy carbonate, and only 0.75 of silica. But the ashes of leaves of the same plant, growing on Mount Breven, a granitic mountain, yielded two parts of silica, and only 16.75 of earthy carbonate. It is probable, however, that plants are not indebted merely to the soil for the earthy particles which they may contain. They may acquire them partly from the atmosphere. Margray has shown that rain water contains silica in the proportion of a grain to a pound; which, if it should not reach the root, may possibly be absorbed along with the water that adheres to the leaves. But although the earths are thus to be regarded as constituting a small proportion of vegetable food, they are not of themselves sufficient to support the plant, even with the assistance of water. Giobert mixed together lime, alumine, silica, and magnesia, in such proportions as are generally to be met with in fertile soils, and moistened them with water. Several different grains were then sown in this artificial soil, which germinated indeed, but did not thrive; and perished when the nourishment of the cotyledons was exhausted.

It is plain, therefore, that the earths, though beneficial to the growth of some vegetables, and perhaps necessary to the health of others, are by no means capable of affording any considerable degree of nourishment to the plant.

Manures.—Having exhibited a brief view of the different species of vegetable food, whether it be regarded as derived from the soil or the atmosphere; we proceed to show how the food necessary to the support of the vegetating plant may be supplied when defective, or restored when exhausted. With regard to the food of plants derived from the atmosphere, the supply is pretty regular, at least in as far as the gases are concerned; for they are not found to vary materially in their proportions on any part of the surface of the globe: but the quantity of moisture contained in the atmosphere is continually varying, so that in the same season you have not always the same quantity, though in the course of the year the deficiency is, perhaps, made up. From the atmosphere, therefore, there is a regular supply of vegetable food kept up by nature for the support of vegetable life, independent of the aid of man: and if human aid were even wanted, it does not appear that it could be of much avail. But this is by no means the case with regard to soils; for if soils are less regular in their composition, they are at least more within the reach of human management. We have already seen the materials of which soils are composed: but what are the proportions of the materials in soils best suited for culture? According to the analysis of Bergman, the soil best suited for culture, contains four parts of clay, three of sand, two of calcareous earth, and one of magnesia: and, according to the analysis of Fourcroy and Hassenfratz, 9216 parts of fertile soil contained 805 parts of carbon, together with 279 parts of oil; of which, according to the calculations of Lavoisier, 220 parts may be regarded as carbon: so that the whole of the carbon contained in the soil in question may be estimated at about 525 parts, exclusive of the roots of vegetables, or to about one-sixteenth of its weight. Young observed, that equal weights of different soils, when dried and reduced to powder, yielded by distillation quantities of air somewhat corresponding to the ratio of their values. The air was a mixture of fixed and inflammable airs, proceeding probably from decomposition of the water; but, partly, it may be presumed, from its capacity of abstracting a portion of air from the atmosphere, which the soil at least is capable of doing. The following is the analysis of a fertile soil, as occurring in the neighbourhood of Bristol. In 400 grains, there were of water, 52; silicious sand, 240; vegetable fibre, 5; vegetable extract, 3; alumine, 48; magnesia, 2; oxide of iron, 14; calcareous earth, 30; loss, 6.

But Kirwan has shown in his *Geological Essays*, that the fertility of a soil depends in a great measure upon its capacity for retaining water: and if so, soils containing the same ingredients must be also equally fertile, all other circumstances being the same; though it is plain that their actual fertility will depend ultimately upon the quantity of rain that falls, because the quantity suited to a wet soil cannot be the same that is suited to a dry soil. And hence it often happens that the ingredients of the soil do not correspond to the character of the climate. Silica exists in the soil under the modification of sand, and alumine under the modification of clay. But the one or the other is often to be met with in excess or defect. Soils in which the sand preponderates retain the least moisture; and soils in which the clay preponderates retain the most: the former are dry soils, the latter are wet soils. But it may happen that neither of them is sufficiently favourable to culture; in which case, their peculiar defect or excess must be supplied or retrenched before they can be brought to a state of fertility. But soils in a state of culture, though

consisting originally of the due proportion of ingredients, may yet become exhausted of the principle of fertility by means of too frequent cropping, whether by repetition or rotation of the same, or of different crops. And in this case, it should be the object of the phytologist, as well as of the practical cultivator, to ascertain by what means fertility is to be restored to an exhausted soil; or communicated to a new one. In the breaking up of new soils, if the ground has been wet or marshy, as is frequently the case, it is often sufficient to prepare it merely by means of draining off the superfluous and stagnant water, and of paring and burning the turf upon the surface. If the soil has been exhausted by too frequently a repetition of the same crop, it often happens that a change of crop will answer the purpose of the cultivator; for although a soil may be exhausted for one sort of grain, it does not necessarily follow that it is also exhausted for another. And accordingly, the practice of the farmer is to sow his crops in rotation, having in the same field a crop, perhaps, of wheat, barley, beans, and tares in succession; each species selecting in its turn some peculiar nutriment, or requiring, perhaps, a smaller supply than the crop that has preceded it. But even upon the plan of rotation, the soil becomes at length exhausted, and the cultivator obliged to have recourse to other means of restoring its fertility. In this case, an interval of repose is considerably efficacious, as may be seen from the increased fertility of fields that have not been ploughed up for many years, such as those used for pasture; or even from that of the walks and paths in gardens when they are again broken up. Hence also the practice of fallowing, and of trenching or deep ploughing, which in some cases has nearly the same effect.

If any one asks how the fertility of a soil is restored by the means now stated, it will be sufficient to reply that, in the case of draining, the amelioration is effected by means of its carrying off all such superfluous moisture as may be lodged in the soil, which is well known to be prejudicial to plants not naturally aquatics, as well as by rendering the soil more firm and compact. In the case of burning, the amelioration is effected by means of the decomposition of the vegetable substances contained in the turf, and subjected to the action of the fire, which disperses part also of the superfluous moisture, but leaves a residue of ashes favourable to future vegetation. In the case of the rotation of crops, the fertility is not so much restored as more completely developed and brought into action; because the soil, though exhausted for one species of grain, is yet found to be sufficiently fertile for another, the food necessary to each being different, or required in less abundance. In the case of the repose of the soil, the restored fertility may be owing to the decay of vegetable substances that are not now carried off in the annual crop, but left to augment the proportion of vegetable mould; or to the accumulation of fertilizing particles conveyed to the soil by rains; or to the continued abstraction of oxygen from the atmosphere. In the case of fallows, it is owing undoubtedly to the action of the atmospheric air upon the soil, whether in rendering it more friable, or in hastening the putrefaction of noxious plants; or it is owing to the abstraction and accumulation of oxygen. In the case of trenching, or deep ploughing, it is owing to the increased facility with which the roots can now penetrate to the proper depth, and thus their sphere of nourishment is increased. But it often happens that the soil can no longer be ameliorated by any of the foregoing means, or not at least with sufficient rapidity for the purposes of the cultivator; and in this case there must be a direct and actual application made to it of such substances as are fitted to restore its fertility. Hence the indispensable necessity of manures, which consist chiefly of animal and vegetable remains that are buried and finally decomposed

in the soil, from which they are afterwards absorbed by the root of the plant in a state of solution.

But as carbon is the principal ingredient furnished by manures as contributing to the nourishment of the plant, and is not itself soluble in water, nor even disengaged by fermentation in a state of purity; under what state of chemical combination is its solution effected? Is it effected in the state of charcoal? It has been thought, indeed, that carbon in the state of charcoal is soluble in water; because water from a dunghill, when evaporated, constantly leaves a residuum of charcoal, as was first ascertained by the experiments of Hassenfratz. But there seem to be reasons for doubting the legitimacy of the conclusion that has been drawn from it; for Senebier found that plants whose roots were immersed in water took up less of the fluid in proportion as it was mixed with water from a dunghill. Perhaps, then, the charcoal of water from a dunghill is held merely in suspension, and enters the plant under some other modification. But if carbon is not soluble in water in the state of charcoal, in what other state is it soluble? It is soluble in the state of carbonic acid gas. But is this the state in which it actually enters the root? On this subject phytologists have been somewhat divided in opinion. Senebier endeavours to prove that carbonic acid gas, dissolved in water, supplies the roots of plants with almost all their carbon, and founds his arguments upon the following facts: in the first place, it is known that carbonic acid gas is soluble in water; in the second place, it is known to be contained in the soil, and generated by the fermentation of the materials composing manures; and, in the next place, it is known to be beneficial to vegetation when applied artificially to the roots, at least in a certain degree. This is evident from the following experiment of Ruckert, as well as from several experiments of Saussure's, previously related. Ruckert planted two beans in pots of equal dimensions, filled with garden mould; the one was moistened with distilled water, and the other with water impregnated with carbonic acid gas. But the latter appeared above ground nine days sooner than the former, and produced twenty-five beans; while the former produced only fifteen. Now, the result of this experiment, as well as the preceding facts, is evidently favourable to the presumption of Senebier, and shows that if carbonic acid is not the state in which carbon enters the plant, it is at least a state preparatory to it; and there are other circumstances tending to corroborate the opinion, resulting from the analysis of the ascending sap of plants. The tears of the vine, when analyzed by Senebier, yielded a portion of carbonic acid and earth; and as the ascending sap could not be supposed to have yet undergone much alteration, the carbonic acid, like the earth, was probably taken up from the soil. But this opinion, which seems to be so firmly established upon the basis of experiment, Hassenfratz strenuously controverts. According to experiments which he had instituted with an express view to the investigation of this subject, plants which were raised in water impregnated with carbonic acid differed in no respect from such as grew in pure water, and contained no carbon that did not previously exist in the seed. Now, if this were the fact, it would be decisive of the point in question. But it is plain from the experiments of Saussure, as related in the preceding section, that Hassenfratz must have been mistaken, both with regard to the utility of carbonic acid gas as furnishing a vegetable aliment, and with regard to the augmentation of carbon in the plant. The opinion of Senebier, therefore, may still be correct. It must be acknowledged, however, that the subject is not yet altogether satisfactorily cleared up; and that carbon may certainly enter the plant in some state different from that, either of charcoal in solution, or of carbonic

acid gas. Is not the carbonic acid of the soil decomposed before entering the plant? This is a conjecture of Dr. Thomson's, founded upon the following facts: the green oxide of iron is capable of decomposing carbonic acid; and many soils contain that oxide. Most soils, indeed, contain iron, either in the state of the brown or green oxide, and it has been found that oils convert the brown oxide into green. But dung and rich soils contain a quantity of oily substance. One effect of manures, therefore, may be that of reducing the brown oxide of iron to the green, thus rendering it capable of decomposing carbonic acid gas, so as to prepare it for some new combination, in which it may serve as an aliment for plants. All this, however, is but a conjecture; and it is more probable that the carbonic acid of the soil enters the root in combination with some other substance, and is afterwards decomposed within the plant itself.

(To be continued.)

ON THE CULTURE OF GRAPES.

Sir,

Alabama, July 24, 1826.

In looking over your truly valuable "Farmer," I discover frequent mention of the successful cultivation of the *grape*. It appears to be found, now, in different sections of the United States, rapidly progressing. On one point, I am satisfied there is too little said, and it is a most important one, viz: the manner of *cultivating the vine* pursued by those who are engaged in it. Could you not, sir, obtain from the different sections of the United States, where you inform us the vine is successfully cultivated, a description of the *mode* pursued, viz: What *species* of grape are they cultivating? How do they *train*? How far apart are the vines planted? How high are they permitted to grow, and what length to run, &c.? It appears pretty well settled, we understand, that the *French* mode of cultivating the vine will not answer in the United States. If it would, is it the mode that appears conformable to reason? Is it possible that grape vines at twelve, or fifteen years, can find nutrition sufficiently, when standing 2½ or 3 feet from each other? Let any person examine the roots of a grape vine, and he will say at once it is unreasonable. It may answer a certain purpose and produce grapes, and those grapes produce good wine. But the question still remains—Is it the mode to produce the *finest* grape—the *finest* wine?

And farther—Is not the plan of *crowding* the vine well calculated to make it short *lived*? In bringing every species of fruit to the highest maturity, (with which we are acquainted in the United States,) *distance* is essentially necessary. Further, a vast deal depends on the score of *profit*, on the mode of cultivating the grape. There appears yet to remain some important questions, which experience alone is to settle. *How long may the main stem* of a vine be permitted to grow, to insure the greatest *maturity* of fruit. The French agriculturist says, 1½ to 2 feet—the vine planter of Madeira says, to the top of his *chestnut tree*. Here is an extraordinary different account; (see Edinburgh Encyclopedia, word *Madeira*.) I am aware it is said loudly, and from France, that different species of grape require different cultivation; but I discover that all grapes grow the *same way* in the forest, viz: they try to reach the top of the highest tree. I confess, sir, it requires extraordinary proof to convince me, that a mode of cultivation of any plant can be the best, that, at the first view, appears an evident *outrage* upon the laws of nature. It is easy to gather the grape after they are ripe—but the *mode of producing the richest* grape is the point to be determined, and on which subject your readers in Alabama are truly interested, and will read every thing with interest that they can procure.

A SUBSCRIBER.

THE OLIVE.

MR. SKINNER,

Beaufort, S. C., Aug. 10, 1826.

Sir,—Reading lately in a newspaper an account of an Olive tree in full bearing, in the vicinity of Mobile; and of a Date tree in New Orleans, which the writer supposes to be the only trees of those descriptions in the United States—I take the liberty of communicating the following facts, that tend to prove that there exist others in our country, and even considerably to the northward of Mobile; which, if you think merit it, you will please insert in your truly valuable paper, and oblige

ONE OF YOUR READERS.

In this town (Beaufort,) are now growing two Olive trees, of a large size, which have produced fruit every season for many years past, and are never affected in the least by our frosts. On a plantation, a few miles from town, are several other trees, much older, and which always bear abundantly. I have eaten of excellent pickled olives, the produce of these trees. Olive trees are found in Charleston, of large growth, and produce fruit with little care. Charleston is more than two degrees north of Mobile. In fact, the climate of every part of Carolina is favourable to the cultivation of the olive.

Seeds of the Date were planted here by two gentlemen of this town in 1819, and the plants from them are now large, and forming the trunk, and seem to want nothing but sufficient age to be productive. The Cocoa-nut tree also, it is highly probable, may be raised with proper care. I have seen one in a garden of the late John M'Queen, Esq., of Georgia, a few miles from the city of Savannah, with branches or leaves eight or nine feet long. The nut was planted by Mr. M'Queen, and the plant grew rapidly, and resisted the effects of the frosts equally well with the prickly pear, (*cactus phyllanthus*), which is a common plant in Beaufort.

On the more southern islands of Georgia, I am persuaded, that the Plantain and Banana may be cultivated with a little regard to situation, soil, &c. as I have seen them grow with us in an open garden, seven or eight feet high. G.

RURAL ECONOMY.

STRENGTH AND SPECIFIC DIFFERENCES OF DIFFERENT KINDS OF PORTER.

The strength of all kinds of beer, like that of wine, depends on the quantity of spirit contained in a given bulk of the liquor.

The reader need scarcely be told, that of no article there are more varieties than of porter. This, no doubt, arises from the different mode of manufacturing the beer, although the ingredients are the same. This difference is more striking in the porter manufactured among country brewers, than it is in the beer brewed by the eminent London porter brewers. The totality of the London porter exhibits but very slight differences, both with respect to strength or quantity of spirit, and solid extractive matter, contained in a given bulk of it. The spirit may be stated, upon an average, to be 4.50 per cent. in porter retailed at the publicans; the solid matter, is from 21 to 23 pounds per barrel of 36 gallons.—The country-brewed porter is seldom well fermented, and seldom contains so large a quantity of spirit; it usually abounds in mucilage; hence it becomes turbid when mixed with alcohol. Such beer cannot keep, without becoming sour.

It has been matter of frequent complaint, that all the porter now brewed, is not what porter was formerly. This idea may be true with some exceptions. My professional occupations have, during these 28 years, repeatedly obliged me to examine the strength of London porter, brewed by different brewers; and, from the minutes made on that subject, I am autho-

raised to state, that the porter now brewed by the eminent London brewers, is unquestionably stronger than that which was brewed at different periods during the late French war. Samples of brown stout with which I have been obligingly favoured, whilst writing this Treatise, by Messrs. Barclay, Perkins, & Co.—Messrs. Truman, Hanbury, & Co.—Messrs. Henry Meux & Co.—and other eminent brewers of this capital—afforded, upon an average, 7.25 per cent. of alcohol, of 0.893 specific gravity; and porter, from the same houses, yielded upon an average 5.25 per cent. of alcohol, of the same specific gravity;* this beer received from the brewers was taken from the same store from which the publicans are supplied.

It is nevertheless singular to observe, that from 15 samples of beer of the same denominations, procured from different retailers, the proportions of spirit fell considerably short of the above quantities. Samples of brown stout, procured from the retailers, afforded, upon an average, 6.50 per cent. of alcohol; and the average strength of the porter was 4.50 per cent. Whence can this difference between the beer furnished by the brewer, and that retailed by the publican, arise? We shall not be at a loss to answer this question, when we find that so many retailers of porter have been prosecuted and convicted for mixing table beer with their strong beer; this is prohibited by law, as becomes obvious by the following words of the Act:—

“If any common or other brewer, inn-keeper, victualler, or retailer of beer or ale, shall mix or suffer to be mixed any strong beer, ale, or worts, with table beer, worts, or water, in any tub or measure, he shall forfeit 50*l*.” The difference between strong and table beer, is thus settled by Parliament.

“All beer or ale above the price of 18 shillings per barrel, exclusive of ale duties now payable (viz. ten shillings per barrel), or that may be hereafter payable in respect thereof, shall be deemed strong beer or ale; and all beer of the price of 18 shillings the barrel or under, exclusive of the duty payable (viz. 2 shillings per barrel) in respect thereof, shall be deemed table beer within the meaning of this and all other Acts now in force, or that may hereafter be passed in relation to beer or ale or any duties thereon.”

ON RAISING AND MAKING WOAD FOR THE BLUE VAT.

(From Partridge's Practical Treatise on Dyeing.)

As I consider the colour produced by the ash vat, to be in every way inferior to that from woad, I shall not attempt to give an account of it; besides I am not well versed in the ash dye, never having seen any until I came to this country. Those who want information on that mode of dyeing, may consult Doctor Cooper's work, where they will find an ample description of it. I am sorry to have to observe, that Mr. Cooper has committed himself very much in asserting that “the ash is the common vat for the blue dye employed in Europe,” when it is a well known fact, that in England, where three times as much blue wool is dyed, as in all other parts of Europe, this vat is totally unknown, not one woollen dyer in fifty having ever heard of it. And I understand it is only used on the continent by those who are ignorant of the woad dye.

In order to succeed well with this mode of dyeing, it will be necessary to obtain a regular supply of woad, and that it be always pretty nearly the same

in quality and strength. To obtain this, it should be raised on strong good land, and always manufactured in the same way; as any considerable variation will disappoint the dyer, and be the means of his producing colours more or less weak, as the woad is bad, or good.

As this plant and the mode of working it, is but little known in America, I shall give, in the first place, a copy of a letter from Mr. John Parish, to the Bath Agricultural Society, on the cultivation and manufacture of it, and afterwards describe the process I pursued to obtain a supply for the Providence Steam Factory during the late war, when English woad was selling at fifty cents per pound.

Mr. Parish informs us that this plant is cultivated in different parts of England, for the use of the dyers, as well as in France, Germany, &c. It is best to sow the seeds in the month of March or early in April, if the season invite: but it requires a deep, loamy soil, and is better still with a clay bottom, such as is not subject to become dry too quickly. It must never be flooded, but situated so as to drain its surface, that it may not be poisoned by any water stagnating upon it.

If at any reasonable price, meadow land can be obtained to break the surface, it will be doubly productive. This land is generally most free from weeds and putrid matter, though sometimes it abounds with botts, grubs and snails. However, it saves much expense in weeding; and judicious management will get rid of these otherwise destructive vermin. A season of warm showers, not too dry, or too wet, gives the most regular crop, and produces the best woad.

If woad is sown on corn land, much expense generally attends hoeing and weeding; and here it will require strong manure, though on leys it is seldom much necessary, yet land cannot be too rich for woad. On rich land, dung should be avoided, particularly on leys, to avoid weeds. Some people sow it as grain, and harrow it in, and afterwards hoe it as turnips, leaving plants at a distance, in proportion to the strength of the land; others sow it in ranks by a drill plough; and some dibble it in, putting three or four seeds in a hole, and these holes to be from twenty inches to two feet apart, according to the richness of the land; for good land, if room be given, will produce very luxuriant plants in good seasons; but if too nearly planted, so that air cannot circulate, they do not thrive so well. Attention to this, is necessary in every way of sowing it. Woad very often fails in its crop, from the land not being in condition, or from want of knowing how to destroy the botts, snails, wire-worms, &c. that so often prey upon and destroy it, as well as from inattention to weeding, &c. Crops fail also from being sown on land that is naturally too dry, and in a dry season; but as the roots take a perpendicular direction, and run deep, such land as I have described (with proper attention to my observations,) will seldom fail of a crop; and if the season will admit of sowing early enough to have the plants strong before the hot and dry weather comes on, there will be almost a certainty of a great produce.

These plants are frequently destroyed in the germination by flies, or animalcules, and by grubs, snails, &c. as before observed; and in order to preserve them, the seeds may be steeped, with good success, in lime and soot, until they begin to vegetate; first throwing half a load or more of flour lime on the acre, and harrowing it in. Then plant the seeds as soon as they break the pod, taking care not to have more than one day's seed ready; for it is better to be too early, than to have their vegetation too strong before it is planted, lest they should receive injury; yet I have never observed any injury in mine from this, though I have often seen the shoot strong. Either harrows or rollers will close the holes. If the ground be moist, it will appear in a few days; but it will be safe and a benefit to the

land, to throw more lime on the surface, when, if showers invite snails and grubs to eat it, they will be destroyed, which I have several times found; particularly when the leaves were two inches long, and in drills very thick and strong, but the ground was dry. When a warm rain fell, in less than two hours I found the ranks on one side attacked by these vermin, and eaten entirely off by a large black grub, thousands of which were on the leaves, and they cleared as they went, not going on until they had destroyed every leaf where they fixed. They had eaten six or seven ranks before I was called by one of my people to observe it. Having plenty of lime, I immediately ordered it in flour to be strewed along those ranks which were not begun. This destroyed them in vast numbers, and secured the remainder. Another time, having had two succeeding crops on four acres of land, I considered it imprudent to venture another. However, as the land after this appeared so rich and clean, I again ventured, but soon found my error. On examining the roots (for after it had begun to vegetate strong, it was observed to decay and wither,) I found thousands of the wire-worm at them, entwined in every root. I immediately strewed lime, four loads of six quarters each, on the four acres, and harrowed it in; when rain coming on soon after, washed it in, destroyed them all, and I had an excellent crop; but the side of the field sown first where they had begun, never quite recovered like the rest.

It is in vain to expect a good crop of woad, of a good quality, from poor and shallow land. The difference of produce and its value is so great, that no one of any experience will waste his labour and attention on such land, upon so uncertain a produce. Warm and moist seasons increase the quantity every where, but they can never give the principal which good land affords.

In very wet seasons, woad from poor land is of very little value. I once had occasion to purchase at such a time, and found there was no possibility of regulating my vats in their fermentation, and I was under the necessity of making every possible effort to obtain some that was the produce of a more congenial season. I succeeded at last, but I kept the other three or four years, when I found it more steady in its fermentation; but still it required a double quantity, and even then its effect was not like that from good woad.

The leaves of woad, on good land, and in a good season, grow very large and long, and when they are ripe, show near their end a brownish spot, while other parts of the leaves appear green, but just beginning to turn of a more yellowish shade; and they must be gathered, or they will be injured.

Woad is to be gathered from twice to four, and even five times in the season, as I once experienced, (it was an early and a late season,) and for the next spring I saved an acre for seed, of which I had a fair crop. I picked the young seedling sprouts off the rest, and mixed with my first gathering of what was newly sown; this was very good. During one season I let these grow too long; the consequence was, that the fibrous parts became like so many sticks, and afforded no juices. When you design to plant woad on the same land the second season, it should, soon after your last gathering, before winter is finished, be ploughed; that is, as soon as the weather will permit, and in deep furrows or ridges, to expose and ameliorate it by the vegetative salts that exist in the atmosphere, and by frost and snow. This, in some seasons, has partly the effect of a change of produce, but if intended for wheat, the last gathering should not be later than September.

The land, after woad, is always clean, and the nature of the soil appears to be changed in favour of the wheat crop: for I have always experienced abundant increase of produce after woad, and ob-

* The average specific gravity of different samples of brown stout, obtained direct from the breweries of Messrs. Barclay, Perkins, & Co. Messrs. Truman, Hanbury, & Co. Messrs. Henry Meux & Co. and from several other eminent London brewers, amounted to 1.022; and the average specific gravity of porter, from the same breweries, 1.018.

† 2 Geo. III. c. 14, § 2. ‡ 59 Geo. III. c. 53, § 29.

served that it held on for some time, if proper changes were attended to, and good husbandry.

Woad, when gathered, is carried to the mill and ground.
(To be continued.)

LADIES' DEPARTMENT.

ODE TO FOLLY.

Hail, Goddess of the vacant eye!
To whom my earliest vows were paid;
Whose prattle hush'd my infant cry,
As on thy lap supinely laid
I saw thee shake, in sportive mood,
Thy tinkling bells and antick hood.
Source of the sweets that never cloy,
Folly, indulgent Parent, hail!
Thine are the charming draughts of joy
That childhood's ruby lips regale:
Thy hands with flowers the goblet crown,
And pour th' ingredients all thy own.
No fiery spirits enter there
To rouse the tingling nerves to pain,
Thy balmy cups, unbought with care,
Swim lightly o'er the tender brain;
Bland as the milky streams they flow,
Nor leave the pungent dregs of woe.
Gay partner of the school-boy band,
Who charm'd the starting tear away;
What, tho' beneath the pedant's hand
My flaxen head devoted lay,
Oft were my truant footsteps seen
In thy brisk gambols on the green.
Too soon those moments danced away;
My years to manhood onward drew,
And as my heart began to play,
My listless limbs more languid grew:
For now a thorn disturb'd my rest,
The wish of something unpossess'd.
At length with wonted pastimes tired,
Aside the boyish gawds I threw;
But when with expectation fired
I to the world's wide circle flew,
I look'd around with simple stare,
And found thee in broad features there.
There, saw thee high in regal seat,
Thy crowded, clamorous orgies hold,
With bounding hands thy cymbals beat,
And wide thy tawdry flag unfold;
Whilst thy gay motley lweries shone,
On myriads that begirt thy throne.
Thy devious path, sweet Pow'r, I join'd:
Thro' fancied fields of bliss we stray'd,
A thousand wonders we design'd,
A thousand idle pranks we play'd:
Now grasp'd at glory's quivering ray,
And now in Chloe's chains we lay.
But Folly, why prolong my verse
To sing the laughter-loving age?
Or what avails it to rehearse
Thy triumphs on the youthful stage,
Where Wisdom, if she claims a place,
Sits ever with an awkward grace?
For now, ev'n now in riper years,
Smit with thy many coloured vest,
Oft I renounce my cautious fears,
And clasp thee to my thoughtless breast;
Enough that in *Presumption's* mien
Beneath my roof thou ne'er art seen:
That,—as my harmless course I run,
The world thro' candid lights I view,
And still with generous Pity shun
The moody, moping, serious crew;
Since what they fondly, vainly prize,
Is ever, ever to be Wise.

SPORTING OILIO.

DISEASES OF DOGS.

FOR EXTRACTING THORNS.

Thorns may be generally extracted with the thumb and fore finger nails; or recourse may be had to the assistance of the penknife in the same way as the sportsman would extract a thorn from his own finger. The dog will frequently perform the operation with his mouth. If the wound festers, the thorn may be squeezed out.

TO BRING HAIR UPON A SCALDED PART.

Fresh hog's lard rubbed frequently upon the affected part, will reproduce hair; indeed, I am inclined to think that animal fat in general will have the desired effect. Fresh goose grease, or the fat of fowls, unmixed with salt, will answer the purpose equally well. Vegetable oils are of too dry a nature, and their effects, as applied to the growth of hair, pernicious. Yet there are not wanting quacks who daily advertise the sale of oil for the growth of hair on the human head; and by way of the strongest possible recommendation, specifically state, that it is extracted from vegetables! This is lamentable, but it is still more so, that such numbers of the unthinking become the dupes of these ignorant pretenders, whose existence is a stigma on the liberality of the public.

TO DESTROY FLEAS, LICE, &c.

Take of White arsenic, one dram;
Water, one gallon;
Soft soap, one quarter of a pound;

boil for ten minutes; then take it off the fire and let it stand to settle, then pour it off into a vessel, leaving about half a pint at the bottom, which throw away, and dress with the water. A certain remedy.

Linseed oil, or Scotch snuff, rubbed well over the body, is a temporary remedy. A good washing with common soap and water will perhaps answer the purpose. In hot weather, dogs are much troubled with fleas; and if the sportsman is anxious for the comfort of the animal, he will find it necessary to use the above several times during the summer. Clean beds and cleanliness in general act as preventives.

TO RECOVER THE SENSE OF SMELL.

When the dog's olfactory organ becomes affected, it will be frequently found to arise from colds, costiveness or other causes, which a dose or two of opening physic seldom fails to remove. A little sulphur, or syrup of buckthorn, will have the desired effect.

SICKNESS, OR A FOUL STOMACH.

Dogs are very liable to a foul stomach; but this is more particularly the case with such as are tied up or confined. If you tie a dog to a kennel for a few days, the moment you loose him, he will run in search of grass to eat, the broad blades of which he prefers; this will frequently cause him to vomit: whenever the animal is troubled with sickness or a foul stomach, he will uniformly have recourse to eating grass, though vomiting does not always follow.

A foul stomach proceeds from indigestion; therefore, eight or ten grains of tartar emetic may be very beneficially given, followed, in a day or two, by a purge of syrup of buckthorn.

A dog never perspires; but whenever he is unwell, his eyes very strongly exhibit the change, are a certain index of the state of his health, and assume a languid, a dull, or a fiery appearance, according to the nature of the disorder with which he is afflicted. The powers of digestion in a dog do not appear to be promoted by exercise. If you take a dog into the field to hunt with a full stomach, he will throw up the contents of it in a few minutes,

or at least in a short period. If you suffer him to sleep after a hearty meal, the digestion is rapid and healthy. Give a dog a good supper on the evening prior to hunting, and the next morning he will require little or nothing. I generally give my dogs a crust of bread in the morning when going out, which, however, they will not always stop to eat, so great is their anxiety for the expected diversion. Little food, and that of a light nature, will be found to answer best upon violent exercise: hence a man walks or labours much better after a breakfast, composed principally of tea or coffee, than after a heavy dinner. Cows, horses, and animals in general, retire to rest after filling their bellies. A full stomach, I have no doubt, is the best to sleep upon; and I therefore differ very widely with those physicians who represent a good supper as injurious to repose.
(To be continued.)

THE GREAT BENEFITS OF LOOSE STABLES.

I have known horses, in trifling lamenesses, receive much benefit from being turned into a loose stable; and all valuable horses should be kept in loose stables. I am certain, if you crack the oats for horses, in a machine made for that purpose, that *three feeds will do a horse nearly as much good as four.**

A horse has a very sweet tooth,—when he is unwell and won't drink, mix molasses or coarse brown sugar in the water: he will then drink freely.

The best stopping I know to make horses' feet grow, or to supple hard feet, which are subject to crack, is linseed boiled, and, when moderately cool, applied to the feet.

I have been informed by an agriculturist who has written on agriculture, and the feeding of cattle, that the following cheap food will do for all horses, which work in the stages, and draft-horses;—not for mail-coach horses, nor post-chaise horses; they must be full fed with oats.—*Half a peck of split beans per day; oats in the straw, one third; two thirds barley or wheat straw; the oats in the straw and straw, to be cut, in a cutting machine, as short as possible, not above a quarter of an inch long. Particularly no hay whatever with this is necessary.*

HOW TO KNOW THE AGE OF A DOG, UNTIL HE IS SIX YEARS OLD.

I have omitted informing you of what will be very useful, and is not so generally known as it ought to be, for I have known several gamekeepers and huntmen not the least acquainted with it: it is to know the age of a dog until he is *six years old*; after which period you cannot ascertain his age. A dog has a very visible mark in his teeth, as well as a horse, which mark does not disappear totally until he is *very near, or full, six years old*. Look to the *four front teeth*, both in the upper and lower jaw, but *particularly* to the teeth in the upper jaw; for, in those four front teeth, the mark remains longest: at twelve months old, you will observe every one of

* In medical books we read, that, from experiments tried, the gastric juices do not operate on any sort of grain, when swallowed *whole* into the stomach, so as to procure the digestion of the grain; but only when it is chewed or broken: so that all grain swallowed *whole* passes through the animal undigested, and of course does him no benefit. This plainly proves how great an advantage you gain by cracking the oats:—how wonderful it is, also, that the gastric juices operate only on dead flesh, both in the human body, and in the body of carnivorous animals. If it operated on living flesh, it would destroy the intestines. In various works of divine nature, how evidently do we see the hand-workmanship, and wisdom of an omnipotent, all-wise, incomprehensible Deity!—

"Whatever is, is right."

...ed every Friday, at \$5 per annum, for JOHN D. TOR, Editor, by JOHN D. TOR, corner of ... streets, where every description ...

AGRICULTURE.**ON RECLAIMING MARSH LAND.**

By R. G. JOHNSON.

(From the Memoirs of the Philadelphia Agric. Society.)
(Continued from p. 187.)**CREEKS AND DAMS.**

It sometimes happens in large tracts of marsh about to be reclaimed, that there are creeks of considerable width and depth, with a strong tide setting through them, and although the sluices may have been laid, and the bank completed, and that too at a very considerable expense; yet, until they be safely dammed out nothing can be said to have been done effectually. No business in the whole circle of agricultural science, appears to me to be of more importance, than a knowledge of the mode of constructing a perfect dam of magnitude upon a mud bottom, over a deep and rapid creek of tide water. The method which I have found to be the best, I will take the liberty of recommending to others. In the first place, I proceed with a hand or two in a boat at low tide, and carefully measure, and note down the depth of water at every eight or ten feet, until I have ascertained the exact depth from shore to shore, as well as the distance across. Then all necessary timber is provided, and worked so as to suit the different purposes for which it is designed; all such posts and other timber as may be wanted for a day's work are put on board of a large scow, or other vessel capable of the service. Having proceeded to the site intended for the dam, stakes are to be set up . . . both sides of the creek, the tops of which must be at least two feet above the intended summit of the bank when finished. With sheer-poles and tackle, we proceed to set down a post by lowering it into the mud, and then forcing it down to its proper depth, either by a man boy, as it is called (being a large block of wood,) worked by hand by the men; or if that be not convenient, by having a large log chained with one end to the top of the post, and the other end resting on the boat, and by the assistance of half a dozen men, jolting up and down on it, the post is soon driven home; another is then set down opposite the last, and when done, they are secured to each other by a large piece of timber called a cap, morticed to suit the tenons of these posts, and raised up and put on them. Thus the labour of setting, diving, and capping these posts is continued until these two rows are completed. After that, a single row of long slim logs, (I have used many from fifty to seventy feet in length,) are to be bolted to the inside of these posts, so near low water mark as the work can be performed. And here I would observe, that all pieces of large timber used in the construction of the dam, and which cross the current, or run parallel with the dam, are called ties. All pieces of timber that cross the dam and rest on the posts, are called caps. All pieces of large timber driven into the mud, and connected by caps, are called posts. All small timber that a man can handle, such as poles, boards or plank, which are forced down by the weight of men into the mud to secure it from slipping, are called pilings. The long ties being bolted to the posts, prevent them rocking about by the rapidity of the current; and they are also the main support to the tops of the pilings which rest against them, and confine the mud to its proper place. Another set of posts, much shorter and lighter than the former, are driven midway in the space between the large posts, and pressed hard against and inside of the long ties. Opposite to these, and furthest from the long posts, other short and light posts are driven down and capped, on a range with the surface of the marsh. These outside posts are secured by a single row of long ties bolted to them; a second row of long ties are then put on the inside of the large or middle

rows of posts, and directly over the in-ends of the caps of the outer posts, forming for these two middle rows of posts two complete rows of long ties, which are bolted to the large posts, and the in-rows of small posts are bolted to these long ties. Thus there will be three distinct apertions or spaces for the mud, and four separate rows of pilings to secure it within, so as to receive the body of the dam to its proper height in the middle apportion or space between the high posts, while the two outer spaces are to be considered as supports or footings to the whole; so that by packing the hardest mud in these outer spaces against the pilings of the inner rows, it is apparent that the whole pressure of the weight of mud will be directly downward; nor can the body of mud incline either to the right or left of these middle rows of pilings, because a like quantity of mud being thrown into each of the outside spaces, will produce a like pressure upon the centre of the dam. For these pilings I would prefer two-inch plank, sawed to suit the varying depths of the water, because they are more easily pointed and more quickly driven to their proper places by three men using a plank, as prescribed in laying down the sluice. In filling up these spaces, (particularly the middle one,) it will be necessary to observe that no more work is to be laid off for the day than can be secured and completed, so that it may not be swept away by the current at night. In doing this, no greater distance along these four rows of ties should be piled, than can be filled up by the hands during the day; and as preparatory to filling up the day's work, three light ties or sticks of timber, about six inches in diameter, and of length sufficient to reach across each of the three spaces, should be laid across the long ties and rested for support against the posts. Within and against these moveable ties, good plank should be stuck down close to each other, and as much mud should be thrown within, as would support them firmly to their places, and enable them to resist the impetuosity of the tide. Without these precautions, the rapidity of the current would carry away the mud as fast as it was thrown in. This process, called cribbing, is necessary to be repeated at every lay-off of the work. From these cribbings, in the middle space, the mud is to be sloped backward, towards the top of the bank that had been previously finished; and before these cribbing planks can be safely removed, there must be another set of cribbing plank put down, and the four rows of long ties piled all in the same manner as the former. Thus we continue to draw up these cribbings next to the bank, and advance the new cribbings as the work progresses, until the breach be completed. To accomplish such work to the best advantage, substantial wheeling plank should be laid over the middle row of caps, for the men to run their barrows on in safety; and when it is necessary to bring their mud from a greater distance than about eighty feet, another gangway should be formed, that all the loaders (or, as they are sometimes called, shovel-men,) may be kept constantly at work. There should be two sets of wheelers for one set of shovel-men; one set of the former to wheel up the mud half way to the dam, and there to meet the other set returning with their empty barrows. At this place they exchange their barrows; those who came up loaded, return with their empty barrows to be again filled, while the others, turning about, proceed to discharge their loads in the breach. That all parts of the work might advance aright, there should also be two large flat-bottom boats, (scows,) which could be very advantageously employed; the one within the dam in the creek, and the other on the outside, with hands sufficient to work them. Their business should be to bring mud from the sides of the creek, and discharge their loads into the two outer spaces, viz. the footings, by throwing the mud with force against the

pilings of the two inner rows. During all the time that the labourers are employed, a few trusty men should be stationed in the mud at the dam, and should be ordered to pack every wheelbarrow load as it is delivered. Should the mud happen to be soft and inclined to slip, it will then be necessary to spread over it occasionally very thin layers of fine brush, or, what is equally proper, three-square young reeds, or any long grass. Alternate layers of such materials being incorporated with the soft mud, give it such tenacity, as that the workmen can carry up the dam to its proper height and shape. The width of such a dam would be from thirty to thirty-four feet, and the work when completed would exhibit a view, from the edge of the water at low tide to the top of the bank, a slope at or about an angle of fifty degrees. Before the work of filling up the breach is fairly entered upon, I consider it safest to guard the opposite side by running off a crib, some ten or twenty feet, and securing it by good mud packed within; for as the work advances and the width of the breach lessens, so in the same proportion, will the rapidity of the current increase. As the work advances, it would be advisable always to let the sluice doors be open to admit the tide into the marsh, and to keep up a pressure on both sides of the dam as nearly equal as possible.

DITCHES.

The marsh being perfectly enclosed, and the tide excluded, it is now necessary to have it divided into lots of such size as may be most easily put into and kept in a dry and improveable state. In whatever number of acres the owner may choose to have his lots, they should be so laid off, as that the ditches dividing them should run perpendicularly from the bank towards the centre of the marsh, and be not more than from twenty to thirty rods distance from each other in good mud; but where the mud is of a light fibrous texture, (such as is vulgarly called horse dung or peat,) the ditches should not be more than twelve rods apart. The reason I would assign for such a division is this, that in irrigating such grounds the water can pass with facility along the ditches, and spread its fertilizing qualities through all parts of the meadows; and also by such distribution, the lowest and poorest parts would receive the greatest proportion of the sediment. Another reason, I even assign, is, that the drier your meadow and better the mud, the finer and more nutritious will be the quality of the grass. It is invariably the case, that you will find the loose or peaty soil in the lowest parts of all marshes, and although it may sometimes produce a tolerable quantity of coarse herbage, or by good cultivation, a prolific crop of the improved grasses; still none of those productions will be half equal in nutrition, to that grown on good mud. In the divisions of the marsh, let all the ditches be cut eight feet wide by three feet deep; a narrow ditch would be unsafe for the cattle.

SEEDING OF MEADOWS.

As soon as possible after the marsh has been enclosed, and while the ditches are cutting, set to work in good earnest to have your grass seed sown. It is all important to have it sown as speedily as practicable. Often have I seen the good effects of early and expeditious seeding of a new marsh, and frequently have I known that a delay for a year or two, has cost a length of time and labour to put in the seed, and even then to very little purpose. Should the marsh have on it a great quantity of wild herbage; no matter, be not dismayed: sow among them, throw on the seed plentifully, and you will in a year or two see your account in it. If any part should remain not seeded when the winter sets in, you may burn off the rubbish (if you think best,) and commence sowing your seed in February; and that it may be evenly scattered over the surface of the

marsh, sow the lots twice, by crossing the first with the second sowing. The roller is always to be preferred for the purpose of beating down the rubbish, rather than destroy it by burning. It is the practice here to sow the grass seed among the reeds, flags and wild oats, disregarding their height. I have been credibly informed a man a few miles from me sowed timothy among a most extraordinary growth of such plants, and who, when the seeding was finished, took a common gate (not having a roller,) and dragged it over the rubbish until it was flattened down; the rubbish soon rotted upon the moist surface, and afforded an abundant nutriment for the tender sets; the consequence was an extraordinary crop of grass the following year.

I would wish to be distinctly understood, that the seed should be sown on the marsh, while it is yet in its wet state, and before the frost of winter or heat of summer, should either pulverize or dry the surface; for both these natural causes operating on the surface after the seed has been sown, will do more for the embryo seed just springing into existence, than (in large bodies of marsh,) hundreds, nay, I might say, thousands of dollars worth of labour could effect. After the seed shall have been sown, (and from long experience I can assert,) that the best and only sure way of speedily getting your meadow into grass, is to pasture it, as severely as possible, for the first and even second year. The wild herbage being kept down by the number of cattle continually feeding thereon, will afford the tender grass an opportunity to take root; while at the same time their continued treading of the soil, tends to bury the seed among the loose and decaying rubbish, and to render the surface more compact; for on that depends the growth of the artificial grasses, and the destruction at the same time of the wild plants. I consider as a truth, that the mellowed marsh is made, the less liable are grass seeds to take root, (although directly the reverse is the case in upland,) or, if they should happen to take root, they might vegetate for a while; but, when the heat and droughts come on, they will most assuredly perish.

Different marsh soils require different kinds of seed. The firm blue mud is best adapted for green grass, timothy and the clovers, particularly the white. The light spongy marsh (called horse dung or peat,) is fitted for none other than the herdgrass. Immediately after the bank is completed, this kind of soil should be sown with herdgrass, while it is yet new and in its wet state, and before it has time even to exhibit dryness on the surface. While it is yet wet, a sward of herdgrass may be formed upon it, and by pasturing it closely for some time, it will then be useful for mowing for many years. I would never recommend the sowing of herdgrass on good mud, because the timothy, clovers and green grass, are all far preferable, much more nutritious, and bear pasturing until quite late; on the contrary, the herdgrass is not so good for pasture, nor will it resist the effects of a late frost in the spring, nor an early one in the fall. Besides, it has a wonderful tendency to root out all the other grasses, with its innumerable long and very fine roots, and from the production of such an immense quantity of seed, which are so easily shattered out and wafted by the wind every where; that should but a very small portion of the seed be mixed with the other grasses and sown on blue mud, it would be discovered in a very few years, that the herdgrass had obtained the complete ascendancy. The herdgrass is admirably adapted for the salt marshes. It is wonderful how easily it can become the companion of even the red salt grass; and in proportion as it acquires strength and root, so in the same proportion does it take the place of that natural proprietor of the saline soil. When I speak of salt marshes, I wish to be understood, those marshes which are consi-

derably brackish, but not so much as those bordering on the ocean. It is asked, what method should a farmer adopt, so as to render a light peaty meadow more compact? I answer, the only probable and sure way would be, to fodder his cattle throughout the winter on it: for their treading would have a tendency to consolidate the surface, and to cause a much thicker growth of young grass the following spring. It may appear incredible to those persons who are strangers to this kind of marsh, when I tell them that a mass of such peat or horse-dung mud, as large as a hoghead or wagon body, exposed for a few weeks in summer to the sun and winds, would take fire as soon as it was applied; or if thrown into water, would float as light as a cork; yet, extraordinary as it may appear, (if proper care be taken to get a sward of herdgrass upon it,) it would astonish the beholder to view the abundant crop. The innumerable roots of the herdgrass, while they obstruct the rays of the sun, and the winds from penetrating the surface, at the same time shut in and retain the moisture for their own benefit; yet, if cultivation in proper time should be neglected, this kind of marsh will finally become so very light and porous, that a man in attempting to walk over it would sink to the depth of his ancles. Am I asked by what method are meadows to be continued improveable, so that they may be rendered capable of yielding considerable quantities of grass by the ordinary resources of any practicable farmer, and that in the most easy and least expensive way? I answer, by IRRIGATION in three ways: 1st. Partial. 2d. Effectual. 3d. Internal.

(To be continued.)

HORIZONTAL PLOUGHING.

Its great advantages in protecting crops from the effect of severe drought—from a correspondent in a middle county of North Carolina.

"The extremely severe drought which has visited this state, and so far as I can learn, the United States and Europe, has been a heavy calamity to the middle counties of North Carolina. Corn crops on our good lands have been diminished one half, and on poor thin soils, which comprise a very considerable proportion of the whole, the diminution has been greater. Want threatens very many, and absolute famine stares not a few in the face. The drought, co-operating with our poor soil and bad farming, has withered the patriotism and uprooted the attachments of many, who are transferring their affections from the sunny dales of North Carolina to the shaded plains of Chickasaw. But other parts of the state are bountifully favoured. In all the low country where droughts are generally favourable, the corn crops are very abundant, and for a line of fifty miles in width across the state next to the Alleghany mountains, the crops are excellent. If the numerous rivers which traverse our state, were navigable, the abundance of one section could readily relieve the wants of another; but they flow in vain, and the expense of transporting bread stuffs to places of want will exceed the cost of the purchase.

"Our system of farming, or rather, our total want of system, always injurious, is this year a heavy calamity. We cultivate little for the sustenance of man or beast, excepting Indian corn; and when that staff fails, we have not another to lean upon. Few of us think of multiplying our dependencies, as we ought, by cultivating peas, rye, grass, &c., not considering that by this variety we are supplying the means of increasing each individual product. Though I throw out this general censure, I am not entirely exempt from it myself; but thanks to one improvement which I have adopted, I shall make enough for my own use, and a little for the wants of others: it is horizontal ploughing. A hasty rain or two which fell,

was detained in my level water furrows to nourish the roots of my famished corn plants, while in the fields of some of my neighbours, favoured by downhill furrows, it glided over the baked surface so quickly as to do them little good. The eyes of some will be opened to better courses, for the mental vision of many is so weak that their faculties of perception must be roused by a rap over the knuckles, ere they can plainly see what is fairly set before them; and this year we have been rapped with a vengeance."

HINTS ON SHEEP.

[The following hints from one of the most judicious graziers that ever settled in our country, deserve particular attention.]

J. S. SKINNER, Esq.

Philadelphia, Aug. 1, 1826.

Sir,—I take liberty in sending you a few hints on the subject of sheep. If you should think them of any interest to the publick, you are at liberty to give them a place in your useful paper. The season has arrived in which every good shepherd should attend strictly to his flock; he will wean his lambs, select his oldest ewes for fattening, and give them the best pasture on his farm, and the worst to his ewes intended to keep over, to be turned with the ram or or about the first of September. He should be looking around him at his neighbours' sheep. If he sees a ram, or a few ewes better than any of his own, he should by all means purchase them; but if not, then select one of his best rams from his own flock. To do this he ought to have at least ten to make his selection from, providing his flock of ewes amounts to fifty in number. Let the great men of these times say what they may about breeding in and in, I have been running rams selected from my own flock for twelve years past, and should have continued to follow the same rule had I not have seen your imported one. I believe he excels in two particular points—size and wool; but for fattening qualities and beautiful forms, I think my old stock equal if not superior. If any of your friends feel a desire to become purchasers of this valuable breed of sheep, (sometimes termed Bakewell or Dishley sheep,) I have a few ewes and rams for sale. The ewes shall have a chance of running with the imported ram till the first of October next. I will sell them for \$20 each; the rams from 20 to \$25, delivered on my farm near Port Penn, Delaware, or in Philadelphia and Baltimore, free of any further charge.

Yours, most truly,

JOHN BARNEY.

PROSPECT OF CROPS.

SIR,

Red House, N. C., August 27, 1826.

I believe at the time I wrote you last, I gave you a very flattering account of the state of our crops; but the seasons since that time, until a short time past, have been very inauspicious, but I am in hopes that the farmers in my neighbourhood will make abundant crops, or at least a sufficiency to live on, provided they use economy and care.

The prospect in the adjoining counties is gloomy and dismal beyond description. You no doubt have seen an account in our state papers of these prospects. Unless they are relieved by importations from the northern states, the poorer class must suffer in the extreme. This has been the fruit of the cotton mania. If they had followed the good advice laid down in your worthy paper, they would have been in a very different situation. I expect that it gives them a lesson that they will not forget soon.

Yours, &c., very respectfully,

JAMES W. JEFFREYS.

HORTICULTURE.

ON THE CULTURE OF THE GRAPE.

J. S. SKINNER, Esq. Columbia, S. C., Aug. 20, 1826.

Sir,—Having promised you, or rather threatened you with a communication on the subject of the grape, I must keep my word, at the risk of only saying what most people know already, and of being blamed by "An Old Man" (your late correspondent,) for writing as if I thought the farmers and planters of this country were still learning the A, B, C, of agriculture. And, in truth, many have not gone much further in the rudiments of it as a science. I hope, however, I shall not be accused of this, particularly as the branch of which I treat, according to my little stock of experience, is not generally understood in this country; and the experience and practice of other countries, however valuable they may be, are not to be absolutely relied on, and implicitly followed in this. I shall instance one which is of some importance, and it is this: that in France it is considered as an indisputable fact, almost an axiom in the culture of the vine and the art of making wine, that to make good wine the grapes must be raised as near to the ground as possible, so that they do not touch it, and that grapes raised higher, even only two or three feet, make comparatively an inferior wine. This is very true there, especially in the north and middle of France; and they, therefore, very seldom have their vines more than four or five feet high altogether, the bearing part of them being within one foot of the ground, and sometimes nearer. They need this, that the heat reflected from the earth may sufficiently mature their grapes. Here, the great ardour of our summer's sun, renders this additional heat not only unnecessary, but very frequently hurtful. Certain it is, that after an experience of fifteen years or upwards, the consequence of almost unremitted experiments during all that time, my grapes never have done well as long as I aimed at having them low. I say aimed; for I could not succeed in restraining the vigour of their growth, notwithstanding all my endeavours to this effect. I have then been obliged to give up the low vines, and to train them higher, about six or seven feet, spreading them fan fashion. They did a little better, but not so as to satisfy me. In short, after having tried a variety of devices, I finally trained my vines with a naked stem seven or eight feet high, and then led the bearing branches horizontally over head. I had long before thought of adopting this mode, but was deterred from it on account of its expensiveness. The frames required to support the vines in this manner cost much more than in any other way; but by making them of good materials, they will last, I hope, several years, perhaps eight or ten. So that it may be the cheapest ultimately. I made use of split light wood, about the size of common fence rails, for posts, which were placed ten feet one way by seven feet the other, and joined them at the top by long sawed laths, three inches wide and one and a half inch thick, covering the square spaces between them with sticks and poles, with intervals between them of about eighteen inches or two feet, so as to form a kind of trellis over head. Another reason, also, that weighed with me considerably, is the greater inconvenience of working at the vines when they are raised so high. The advantages, however, were found to preponderate. The vines certainly bear more fruit. The grapes hang loosely, and, as it were, detached, on the under part of the ceiling. They are sheltered by the leaves from the burning heat of the sun, and the sides having neither leaves nor fruit, allow a free circulation of the air beneath, and I think prevent the bad effects of the hot steam that sometimes arises from the earth and causes the grapes to rot by scalding the skin. There is another advantage; which is, that the birds cannot get at them so easily;

whether it is that they do not see them, or can find no place to perch upon, so as to eat them at their ease, certain it is that they do not commit one fourth the depredation on them when thus hanging under the cover of the leaves, than when they are differently exposed.

It requires at least six or seven years from the time of planting the cuttings, for the vines to have acquired strength and thickness sufficiently to be trained to this height; for this must be done gradually; or else one would run the risk of having the bodies of his vines too slender and too weak to do well. They will bear fruit, notwithstanding, every year from the third; but the vines will not be fully formed till the sixth or seventh.

When trained in this manner, the vines must not be planted as near each other as when kept lower. I think ten feet one way by seven or eight the other, will do very well; and even if the soil is good, the distance may be increased with advantage. That there may be no loss in the use of the ground, I would recommend to plant the vines much closer at first, and dig up, occasionally, the weakest of them to make room for the best, as they grow large and require more space.

It may not be amiss to say something here as to the manner of planting cuttings, so as to insure their success; though this has been said and repeated in your valuable "American Farmer," and elsewhere. Good cuttings having been well selected. They must be of the preceding year's growth, the wood being well matured; and the best are those that have a few inches of the old, or two years old wood, though the next cut of a strong vine is also very good; have holes dug about eighteen inches deep and two feet square, or more, (the larger the holes the better—I have even thought it best to make a continuous trench of that depth two feet wide and the whole length of the row,) return into the bottom a part of the surface vegetable earth, which must for this purpose have been put on one side of the hole or trench; and on this place your cuttings a little sloping, and fill up the hole with the remainder of the vegetable earth; and as the quantity of it dug out may not be sufficient, rake up in the vicinity a sufficient quantity to answer your purpose, leaving the earth around the planted cuttings rather higher than the general level of the ground. As you fill in the earth, press it gently against the cutting, but not too hard. The cutting so planted had better have but one bud out of the ground, provided it be a good one. The proper length for cuttings is about two feet. In our Southern states, I would recommend to plant in the fall, the sooner after the cuttings have been separated from the vines the better. They will do, however, planted any time until March during mild weather. As soon as you have your cuttings, if you are not ready to plant them, bury them entirely in the ground, or keep them in a cool cellar; but the burying of them is the best. Although I have known vine cuttings to grow after having been separated from the vines six months, and that without having been buried or protected by any covering, other than the bundles of them being deposited in a warehouse and in the hole of a ship, I have always found them to succeed much better when they had not been exposed, even one night, to the frost. After the cuttings have been planted as above directed, it will conduce to their success to cover with earth the bud left out to grow, making a little hillock over it to protect it from the frost; and when vegetating weather comes on in the spring, uncover it gently, and should you have reason to fear a frost after the bud has pushed, cover it gently again with earth, and uncover it when the danger is past. In doing this, great care must be taken lest the bud or young shoot be broken off in covering, and particularly in uncovering it. Grape cuttings will sometimes do well without all these

precautions; but a little trouble taken at first may save a great deal afterwards. Indeed, in every thing we do, we ought to recollect this maxim, that "what is worth doing at all, is worth the doing it well." It is a very good plan when you plant your cuttings, if you have enough of them, to plant two near each other, where you intend having only one; but plant them so that the lower ends diverge from each other, the tops being a few inches apart, thus.

If both grow, one of them may be taken up, at a proper time, and planted elsewhere. Suffer only one shoot to grow from each cutting, and fasten them upright to small stakes, stuck by them for this purpose. In putting the stakes in the ground to support the young vines, have the precaution to put them on the back of them; that is, on the side opposite to the sloping of the plants, that the stakes may not injure the tender roots.

The grape vine will grow in almost all kinds of soils; but they will do best in a light sandy soil, dry, and of such a degree of fertility as to produce from eight to fifteen bushels of corn per acre; though it will grow, thrive and do tolerably well even in poorer soil. The situation ought to be selected high, airy, and with a gentle slope facing the east or south; but they will do well in any exposure in this climate.

If it be true (and of this there cannot be any doubt,) that a poor, light, sandy soil will produce not only good wine, but an abundance of it, what excuse can we, of the Southern states, have for suffering millions of acres of land to lie idle, despised and uncultivated? We pay every year large sums of money for wines and brandies brought from foreign countries, when we can make as good, and perhaps better at home, at a much cheaper rate. It cannot be that we think it not worth while to add to our present white population, a laborious, industrious and honest set of people, which is almost always the character of industrious cultivators of the soil; and there are millions of such individuals in France, Germany and Italy, who would come and cultivate our neglected sandy lands, if they had the means of leaving their country, and knew how and where to find us. This view of the subject gives rise to many reflections and most serious thoughts on the present and prospective situation of our Southern states, and we may find, when perhaps it is too late, that our security might have been affected by inducing such an increase of population as is here contemplated.

There is now no doubt of success, and I have this year made upwards of 150 gallons of wine on about half an acre of land, which, if planted in corn, would not in a common year produce more than seven or eight bushels to the acre, and would not this year have produced five bushels, with all the care and cultivation that could have been bestowed upon it. The wine thus made will not only be good, but very good—better, probably, than nine tenths of the wines imported into this country. I am well aware that the above assertion will draw upon me the incredulity of some and the sneers of many; but neither the incredulity of the one nor the sneers of the other, can prevent a fact from being a fact; and it is easier to deny an assertion than to prove its fallacy.

The present season has been very favourable to the vines, except in the spring, when late frosts did so much injury that, but for the immense resources of this climate, the vines would have produced but little, or rather no fruit. Such frosts in Europe, particularly in the North, would have destroyed all hopes of a crop for the year; and no doubt my crop would have been much greater but for this. In order that the manner of repairing the injury done by the spring frosts may be understood, it must be observed that the upper buds of the vine are always the first to grow, except sometimes

suckers from the root, which ought always to be broken off, unless wanted very particularly; and if nothing injures them, the buds below the two or three upper ones, will either not push at all, or make but slender shoots. After, then, the apparent almost total destruction of my vines by the frost, I determined to prune them over again, and I amputated, without any hesitation, every part that had been in the least touched with the frost. The rising sap followed the knife every where, and the bleeding of the vines was enough to frighten any one but a bold and experienced surgeon. This bleeding, most abundant as it was, did little or no injury, and it stopped after a few days. The buds that were left and had now become the upper ones, supplied the places of those that had been cut off, they pushed and bore a plenty of fruit, which the favourable season brought to an early and perfect maturity.

Although I must attribute in a great measure to the severe drought of this summer, my success, as the grapes had scarcely any rot at all, I have reasons to believe that the manner of training them conducted also to this valuable exemption. I have also reason to believe that the rot of the grapes decreases as the vines grow older, and they also acquire by the age of the vines a superior degree of richness of juice, and a more perfect maturity.

Whether or not it would be fit for the legislatures of the Southern states to promote, by some efficacious means, a culture that promises so many advantages, is a question that may be worth examining. The discussion of it can do no harm, and may be productive of much good. I make no hesitation in giving it as my opinion, humble though it be, that it would be perfectly proper, and that few acts of our legislatures could have so direct a tendency to secure the prosperity, peace, wealth and respectability of the countries under their legislation, as that which would give great value to lands within their limits, that now possess none; as that which would give us a hardy, industrious and honest population, where we are so miserably deficient; as that which would increase the revenues of the states, by increasing their valuable productions; as that which would preserve in the country the vast sums of money annually sent abroad; as that which would have most undoubtedly a tendency to render every class of our population more moral, more healthy, and of course more happy? In short, by what act could our legislatures secure our tranquility at home, by stifling in its very germs any disturbance in a certain part of our present population, secure and tighten the bands that unite the United States together, for our strength at home would prevent the intermeddling in our domestic concerns of our well-meaning, perhaps, though very dangerous friends at the North?

To the cultivation of the vine I would add, to promote the same valuable ends, the cultivation of madder, silk, wool and olives, for the production of which very profitable articles, this same tract of almost deserted country is eminently adapted.

How is this to be done? Induce the removal to this country of the suitable labourers from Europe; show them the way to our shores, and make it worth their while to settle among us. Very small advantages to them will be sufficient.

The above, which are no more than hints, deserve to be examined seriously, and more fully commented upon by one better qualified than the subscriber, who may, for his pains be called a visionary man. If he labours under a delusion, it is produced by a true and sincere wish to promote the permanent advantage of his adopted country, by which he would be benefited in common with the rest of his fellow citizens, and to do all in his power to advance the same laudable objects.

N. HERBEMONT.

SCIENCE OF GARDENING.

(From Loudon's Encyclopedia of Gardening.)

FUNCTIONS OF VEGETABLES.

Process of Nutrition.

It is necessary to know not only in what the food of plants consists, but also by what means that food, whether lodged in the soil or wafted through the atmosphere, is taken up by the plant, conveyed to its different parts, and elaborated so as to prepare it for final assimilation.

Intro susception.—As plants have no organ analogous to the mouth of animals, they are enabled to take up the nourishment necessary to their support only by absorption or inhalation, as the chyle into the animal lacteals, or the air into the lungs. The former term will be applied to the intro-susception of non-elastic fluids; the latter, to that of gaseous fluids. The absorption of non-elastic fluids by the epidermis of plants does not admit of a doubt. It is proved, indisputably, that the leaves not only contain air, but do actually inhale it. It was the opinion of Priestley that they inhale it chiefly by the upper surface. And it has been shown by Saussure, that their inhaling power depends entirely upon the organization. It has been a question, however, among phytologists, whether it is not also effected by the epidermis of the other parts of the plant. We can scarcely suppose it to be effected by the dry and indurated epidermis of the bark of aged trunks, of which the original organization is obliterated; nor by that of the larger and more aged branches. But it has been thought there are even some of the soft and succulent parts of the plant by which it cannot be effected, because no pores are visible in their epidermis. M. Decandolle found no pores in the epidermis of fleshy fruits, such as pears, peaches, and gooseberries; nor in that of roots, or scales of bulbs; nor in any part not exposed to the influence of air and light. It is known, however, that fruits will not ripen, and that roots will not thrive, if wholly deprived of air; and hence it is probable that they inhale it by their epidermis, though the pores by which it enters should not be visible. In the root, indeed, it may possibly enter in combination with the moisture of the soil; but in the other parts of the plant it enters no doubt in the state of gas. Herbs, therefore, and the soft parts of woody plants, absorb moisture and inhale gases from the soil or atmosphere by means of the pores of their epidermis, and thus the plant effects the intro-susception of its food.

Ascent of the Sap.—The means by which the plant effects the intro-susception of its food, is chiefly that of absorption by the root. But the fluids existing in the soil when absorbed by the root, are designated by the appellation of sap or lymph; which, before it can be rendered subservient to the purposes of vegetable nutrition, must either be intermediately conveyed to some viscus proper to give it elaboration, or immediately distributed throughout the whole body of the plant. Our present object, therefore, is that of tracing out the progress of its distribution or ascent. The sap is in motion in one direction or other, at least at occasional periods, as the bleeding of plants in spring and autumn sufficiently illustrates. The plant always bleeds most freely about the time of the opening of the bud; for in proportion as the leaves expand the sap flows less copiously, and when they are fully expanded it entirely ceases. But this suspension is only temporary, for the plant may be made to bleed again in the end of the autumn, at least under certain conditions. If an incision is now made into the body of the tree, after the occurrence of a short but sharp frost, when the heat of the sun or mildness of the air begins to produce a thaw, the sap will again flow. It will flow even where the tree has been but partially thawed, which sometimes happens on the south side of a tree, when the heat of the sun is

strong and the wind northerly. At the seasons now specified, therefore, the sap is evidently in motion; but the plant will not bleed at any other season of the year. It has been the opinion of some phytologists, that the motion of the sap is wholly suspended during the winter. But though the great cold of winter, as well as the great heat of summer, is by no means so favourable to vegetation as the milder though more changeable temperature of spring and autumn, yet it does not wholly suspend the movement of the sap. Palms may be made to bleed at any season of the year. And although this is not the case with plants in general, yet there is proof sufficient that the colds of winter do not, even in this climate, entirely prevent the sap from flowing. Buds exhibit a gradual development of parts throughout the whole of the winter, as may be seen by dissecting them at different periods. So also do roots. Evergreens retain their leaves; and many of them, such as the *Arbutus*, *Laurustinus*, and the beautiful tribe of the mosses, protrude also their blossoms, even in spite of the rigour of the season. But all this could not possibly be accomplished, if the motion of the sap was wholly suspended.—The sap then is in perpetual motion with a more accelerated or more diminished velocity throughout the whole of the year; but still there is no decided indication, exhibited in the mere circumstance of the plant's bleeding, of the direction in which the sap is moving at the time; for the result might be the same whether it was passing from the root to the branches, or from the branches to the root. But as the great influx of the sap is effected by means of the pores of the epidermis of the root, it follows that its motion must, at least in the first place, be that of ascent; and such is its direction at the season of the plant's bleeding, as may be proved by the following experiment—if the bore or incision that has been made in the trunk is minutely inspected while the plant yet bleeds, the sap will be found to issue almost wholly from the inferior side. If several bores are made in the same trunk one above another, the sap will begin to flow first from the lower bore, and then from those above it. If a branch of a vine be lopped, the sap will issue copiously from the section terminating the part that remains yet attached to the plant; but not from the section terminating the part that has been lopped off. This proves indubitably that the direction of the sap's motion, during the season of the plant's bleeding, is that of ascent. But if the sap flows so copiously during the season of bleeding, it follows that it must ascend with a very considerable force; which force has accordingly been made the subject of calculation. To the stem of a vine cut off about two feet and a half from the ground, Hales fixed a mercurial gauge which he luted with mastic; the gauge was in the form of a syphon, so contrived that the mercury might be made to rise in proportion to the pressure of the ascending sap. The mercury rose accordingly, and reached, as its maximum, to a height of thirty-eight inches. But this was equivalent to a column of water of the height of forty-three feet three and one-third inches; demonstrating a force in the motion of the sap that, without the evidence of experiment, would have seemed altogether incredible. The sap then in ascending from the lower to the upper extremity of the plant is propelled with a very considerable force, at least in the bleeding season. But is the ascending sap propelled indiscriminately throughout the whole of the tubular apparatus, or is it confined, in its course, to any particular channel? Before the anatomy of plants had been studied with much accuracy, there was a considerable diversity of opinion on the subject. Some thought it ascended by the bark; others thought it ascended by the bark, wood, and pith indiscriminately; and others thought it ascended between the bark and wood. The first opinion was maintained and supported by Malpighi, and Grew

considers that the sap ascends by the bark, wood, and pith indiscriminately. Du Hamel stripped several trees of their bark entirely, which continued, notwithstanding, to live for many years, protruding new leaves and new branches as before. Knight stripped the trunk of a number of young crab-trees of a ring of bark half an inch in breadth, but the leaves were protruded, and the branches elongated, as if the operation had not been performed. It is evident, therefore, that the sap does not ascend by the bark. But it is equally evident that it does not ascend by the pith, at least after the first year; for then, even upon Grew's own supposition, it becomes either juiceless or wholly extinct: and even during the first year it is not absolutely necessary, if at all subservient to the ascent of the sap, as is proved by an experiment of Knight's. Having contrived to abstract from some annual shoots a portion of their pith, so as to interrupt its continuity, but not otherwise materially to injure the fabric of the shoot, Knight found that the growth of the shoots which had been made the subject of experiment was not at all affected by it.—The sap then ascends neither by the bark nor pith, but by the wood only. But the whole mass of the wood throughout is not equally well adapted for the purpose of conveying it. The interior and central part, or part that has acquired its last degree of solidity, does not in general afford it a passage. This is proved by what is called the girdling of trees, which consists in making a circular gap or incision quite round the stem, and to the depth of two or three inches, so as to cut through both the bark and alburnum. An oak-tree on which Knight had performed this operation, with a view to ascertaining the channel of the sap's ascent, exhibited not the slightest mark of vegetation in the spring following. The sap then does not ascend through the channel of the matured wood. But if the sap ascends neither through the channel of the bark, nor pith, nor matured wood, through what other channel does it actually ascend? The only remaining channel through which it can possibly ascend is that of the alburnum. In passing through the channel of the alburnum, does the sap ascend promiscuously by the whole of the tubes composing it, or is it confined in its passage to any peculiar set? The earliest conjectures recorded on this subject are those of Grew and Malpighi, who, though they maintained that the sap ascends chiefly by the bark, did not yet deny that it ascends also partly by the alburnum or wood. It occurred to succeeding phytologists that the progress of the sap and the vessels through which it passes, might be traced or ascertained by means of making plants vegetate in coloured infusions. Du Hamel steeped the extremities of branches of the fig, elder, honeysuckle, and filbert in common ink. In examining the two former, after being steeped for several days, the part immersed was found to be black throughout, but the upper part was tinged only in the wood, which was coloured for the length of a foot, but more faintly and partially in proportion to the height. The pith indeed exhibited some traces of ink, but the bark and buds none. In some other examples the external layers of the wood only were tinged. In the honeysuckle the deepest shade was about the middle of the woody layers; and in the filbert there was also observed a coloured circle surrounding the pith, but none in the pith itself, nor in the bark. Thus it is proved that the sap ascends through the vessels of the longitudinal fibre composing the alburnum of woody plants, and through the vessels of the several bundles of longitudinal fibre constituting the woody part of herbaceous plants. But it has been already shown that the vessels composing the woody fibre are not all of the same species. There are simple tubes, porous tubes, spiral tubes, mixed tubes, and interrupted tubes. Through which of these, therefore, does the sap pass in its ascent? The best reply to this inquiry has been

furnished by Knight and Mirbel, whose experiments on the subject are considerably more luminous than the preceding. Knight prepared some annual shoots of the apple and horse-chestnut, by means of circular incisions, so as to leave detached rings of bark with insulated leaves remaining on the stem. He then placed them in coloured infusions obtained by macerating the skins of very black grapes in water; and, on examining the transverse section at the end of the experiment, it was found that the infusion had ascended by the wood beyond his incisions, and also into the insulated leaves, but had not coloured the pith nor bark, nor the sap between the bark and wood. From the above experiment Knight concludes that the sap ascends through what are called the common tubes of the wood and alburnum, at least till it reaches the leaves. Thus the sap is conveyed to the summit of the alburnum. But Knight's next object was to trace the vessels by which it is conveyed into the leaf. The apple-tree and horse-chestnut were still his subjects of experiment. In the former the leaves are attached to the plant by three strong fibres, or rather bundles of tubes, one in the middle of the leaf-stalk, and one on each side. In the latter they are attached by means of several such bundles. Now the coloured fluid was found in each case to have passed through the centre of the several bundles, and through the centre only, tinged the tubes throughout almost the whole length of the leaf-stalk. In tracing their direction from the leaf-stalk upwards, they were found to extend to the extremity of the leaves; and in tracing their direction from the leaf-stalk downwards, they were found to penetrate the bark and alburnum, the tubes of which they join, descending obliquely till they reach the pith which they surround. From their position Knight calls them central tubes, thus distinguishing them from the common tubes of the wood and alburnum, and from the spiral tubes with which they were every where accompanied as appendages; as well as from a set of other tubes which surrounded them, but were not coloured, and which he designates by the appellation of external tubes. The experiment was now transferred to the flower-stalk and fruit-stalk, which was done by placing branches of the apple, pear, and vine, furnished with flowers not yet expanded, in a decoction of logwood. The central vessels were rendered apparent as in the leaf-stalk. When the fruit of the two former was fully formed, the experiment was then made upon the fruit-stalk, in which the central vessels were detected as before; but the colouring matter was found to have penetrated into the fruit also, diverging round the core, approaching again in the eye of the fruit, and terminating at last in the stamens. It was by means of a prolongation of the central vessels, which did not however appear to be accompanied by the spiral tubes beyond the fruit-stalk. Such then are the parts of the plant through which the sap ascends, and the vessels by which it is conveyed. Entering by the pores of the epidermis, it is received into the longitudinal vessels of the root by which it is conducted to the collar. Thence it is conveyed by the longitudinal vessels of the alburnum, to the base of the leaf-stalk and peduncle; from which it is further transmitted to the extremity of the leaves, flower, and fruit. There remains a question to be asked intimately connected with the sap's ascent. Do the vessels conducting the sap communicate with one another by inoculation or otherwise, so as that a portion of their contents may be conveyed in a lateral direction, and consequently to any part of the plant; or do they form distinct channels throughout the whole of their extent, having no sort of communication with any other set of tubes, or with one another?—Each of the two opinions implied in the question has had its advocates and defenders. But Du Hamel and Knight have shown that a branch will still continue to live though the tubes leading directly to it are cut in the

trunk; from which it follows that the sap, though flowing the most copiously in the direct line of ascent, is at the same time also diffused in a transverse direction.

(To be continued.)

INTERNAL IMPROVEMENT.

CHESAPEAKE AND OHIO CANAL.

THE CENTRAL COMMITTEE OF THE CHESAPEAKE AND OHIO CANAL met pursuant to the adjournment, at Brown's Hotel, when the address submitted to the Committee on the preceding day was adopted as follows:

The Central Committee of the Convention which assembled in the Capitol of the United States on the 6th of November, 1823, to consider the means of uniting the waters of the Potomac and Ohio rivers, and of connecting them with the Northwestern Lakes, by navigable Canals—To the members of the Convention, and to the inhabitants of such Counties and Corporations of the States of the West, and Pennsylvania, Maryland, and Virginia, as feeling an interest in the object of the Convention, have not hitherto had an opportunity of sending Delegates thereto:

GENTLEMEN: Pursuant to the intention of the Convention which met in the City of Washington on the 6th of November, 1823, and in compliance with the subjoined request of the Board of Commissioners deputed by the President of the United States, and the Executives of the States of Maryland and Virginia, to open books for the subscription of stock to the Chesapeake and Ohio Canal, the Central Committee beg leave to recommend a re-assemblage of the Members of the Convention, at the place of their former meeting, on the Wednesday next ensuing the first Monday, being the 6th day of December next.

The Central Committee farther recommend to the Delegates of the several Counties and Corporations by which Representatives have been already chosen, to cause to be supplied, in due time, by a new election, any vacancies which may have occurred in their respective delegations, from death, removal, or inability.

In behalf of the Convention, the Committee, also, earnestly invite such Counties and Corporations of the several States, interested in the construction of the Chesapeake and Ohio Canal, as were not represented, at the last, to depute delegates to the ensuing meeting.

The period which has elapsed, since the Convention first assembled in this City, having been employed in extensive surveys of the Mountains which separate the waters of the Ohio and the Potomac, and of the Territory between the former and the great Western Lakes, and these surveys, accompanied by minute estimates of the probable cost of the Canal, being in readiness to be submitted to the public eye, it is deemed expedient, by the Committee, that the sense of the Convention should be expressed on the propriety of changing any part of the line prescribed for the proposed canal, in the charter granted at the instance of the Convention, by the States of Virginia, Maryland, and Pennsylvania, and the Congress of the U. States.

The late confirmatory act of the Pennsylvania Legislature, being founded upon recent information, allows to the Company, which may arise under the charter, authority to alter the route of the Canal from Cumberland, towards the Ohio, in such manner, as expediency may warrant or require. But the charter granted by Virginia and Maryland, allowing no departure from a specified direction, can be, itself altered, only by amendment: and such amendment, to be valid, must receive not only the sanction of the authority from which the charter

emanated, but that, also, of the existing Potomac Company, whose assent to the new charter has been already obtained.

It is farther believed by the Committee, that a meeting of Delegates from the extensive Territory through which the Canal may be expected to pass, would afford the best opportunity of testing, by reference to actual experience, any estimate of the probable cost of its construction, so far as that may depend, as it must, to a great extent, on the current price of those common materials which it may require, and the wages of ordinary labour.

The agreement of the Convention, on such principles of a just estimate as daily experience can supply, would exert a favourable influence in removing existing doubts, and preventing future misunderstandings, where confidence and harmony may be found essential to success. Such information as mutual consultation and a comparison of facts might derive, from a source, so competent to supply it, would assist the Congress of the United States in determining the extent of the aid that expediency will warrant to an enterprise, which involving, as the Chesapeake and Ohio Canal unquestionably does, not only the prosperity of a district, confided exclusively to their guardianship, but the best interests, as well as one of the strongest bonds of the American Union, has, nevertheless, to combat for existence with very powerful local interests and deep-rooted prejudices: interests, which will ultimately, it may be hoped, surrender their jealousy to the reflection that every canal which can be made to unite the Eastern and Western waters, will be required by the growing and boundless commerce of the Western and Atlantic States; and prejudices which will yield, in time, to the prevalence of a just and liberal construction of the Federal Constitution, and to the diffusive light of an enlarged experience.

The surveys, to which the Committee have referred, have, moreover, developed new ties of connection between the Chesapeake and Ohio Canal, and the interests of the adjacent States. It can now scarcely be questioned, but that the markets of Philadelphia and Baltimore, may be brought, by the junction of the Potomac with the Susquehanna, above the Blue Ridge, and with the Patapsco below it, into fair competition with those of the District of Columbia. Most erroneous and exaggerated rumours of the probable cost of the proposed canal are giving way to corrected estimates and reports; and there never was a period, the Committee are induced to believe, when the friends of this enterprise, encompassed as it has been by peculiar difficulties, had so much reason as at present to confide in its ultimate accomplishment.

The immediate advantages which resulted from the former meeting of the Convention; the harmonious co-operation which it produced among so many widely dispersed friends of an extensive enterprise; the earnest zeal which it promoted if it did not awaken, for the speedy completion of that enterprise; the favourable regard which it conciliated from the Executive Government of the United States, manifested by the President's message at the opening of the succeeding Congress, are pledges of similar, if not greater benefit, from the re-assemblage of the members of the Convention, and the augmentation of their number by the representatives of the people of those remote districts of the country, who although comprised in the territorial invitation, had not time, after receiving it, to be present. Delegates of those distant parts, if elected, will be able to give more extensive and accurate views of the country, and the interests of the people, than could be given by those who are more immediately connected with the project.

it is hoped, an additional incentive to undertake a journey to Washington.

C. F. MERCER, Ch. C. C.

Washington, August 30, 1826.

LADIES' DEPARTMENT.

MANAGEMENT OF FAMILIES.

(From the Introduction to Mrs. Holland's Complete Economical Cook.)

In domestic arrangement the table is entitled to no small share of attention, as a well conducted system of domestic management is the foundation of every comfort, and the respectability and welfare of families depend in a great measure on the prudent arrangement of the female whose province is to manage their domestic concerns.

However the fortunes of individuals may support a large expenditure, it will be deficient in all that can benefit or grace society, and in every thing essential to moral order and rational happiness, if not conducted on a regular system, embracing all the objects of such a situation.

In domestic management, as in education, so much must depend on the particular circumstances of every case, that it is impossible to lay down a system which can be generally applicable.

The immediate plan of every family must be adapted to its own peculiar situation, and can only result from the good sense and early good habits of the parties, acting upon general rational principles.

What one family is to do, must never be measured by what another family does. Each one knows its own resources, and should consult *them alone*. What might be meanness in one, might be extravagance in another, and therefore there can be no standard of reference but that of individual prudence. The most fatal of all things to private families, is to indulge an ambition to make an appearance *above their fortunes, professions, or business, whatever these may be*.

The next point, both for comfort and respectability, is, that all the household economy should be uniform, not displaying a parade of show in one thing, and a total want of comfort in another. Besides the contemptible appearance that this must have to every person of good sense, it is productive of consequences not only of present, but of future injury to a family, that are too often irreparable.

In great cities in particular, how common is it that for the vanity of having a showy drawing room to receive company, the family are confined to a close back room, where they have scarcely either air or light, the want of which must materially prejudice their health.

To keep rooms for show, where the fortune is equal to having a house that will accommodate the family properly and comfortably, belongs to the sphere of the ladies, to shut up the only room which is really whole and comfortable, for the sake of a few pieces of furniture, and a few trifles, is a great error.

It is not only a great error, but a great waste of money, to keep a house for show, where the fortune is equal to having a house that will accommodate the family properly and comfortably, belongs to the sphere of the ladies, to shut up the only room which is really whole and comfortable, for the sake of a few pieces of furniture, and a few trifles, is a great error.

sent; because the mother can spare no time to attend to them at home.

Social intercourse is not improved by parade, but quite the contrary; real friends, and the pleasantest kind of acquaintance, those who like to be sociable, are repulsed by it. Here is a failure, therefore, every way—the loss of what is really valuable, and an abortive attempt to be fashionable.

A fundamental error in domestic life of very serious extent, as it involves no less or even more than the former, the health of the family, arises from the ignorance or mistaken notions of the mistress of the house upon the subjects of diet and cookery.

The subject of cookery is, in general, either despised by women as below their attention, or when practically engaged in it, it is with no other consideration about it than, in the good housewife's phrase, to make the most of every thing, whether good, bad or indifferent; or to contrive a thousand mischievous compositions, both savoury and sweet, to recommend their own ingenuity.

The injuries that result from these practices will appear in the course of this work. When these are fully considered, it can no longer be thought derogatory, but must be thought honourable, that a woman should make it her study to avert them. If cookery has been worth studying, as a sensual gratification, it is surely much more so as a means of securing one of the greatest of human blessings—good health.

It is impossible to quit this part of the subject of domestic management without observing, that one cause of a great deal of injurious cookery, originates in the same vanity of show that is productive of so many other evils. In order to set out a table with a greater number of dishes than the situation of the family at all requires, more cookery is often undertaken than there are servants to do it well, or conveniences in the kitchen for the purpose. Thus things are done before they are wanted for serving up, and stand by spoiling, to make room for others; which are again perhaps to be succeeded by something else, and too often things are served up that would be more in their place thrown away, or used for any thing rather than food.

The leading consideration about food ought always to be its wholesomeness. Cookery may produce savoury and pretty looking dishes without their possessing any of the qualities of food. It is at the same time both a serious and ludicrous reflection that it should be thought to do honour to our friends and ourselves to set out a table where indigestion and all its train of evils, such as fever, rheumatism, gout, and the whole catalogue of human diseases lie lurking in almost every dish. Yet this is both done, and taken as a compliment. We have indeed the "unbought grace of polished society, where gluttony loses half its vice by being stripped of its grossness." When a man at a public house dies of a surfeit of beef steak and porter, who does not exclaim, what a beast!

How infinitely preferable is a dinner of far less show, where nobody need be afraid of what they are eating! and such a one will be genteel and respectable. If a person can give his friend only a leg of mutton, there is nothing to be ashamed of, provided it is a good one, and well dressed.

A house fitted up with plain good furniture, a kitchen furnished with clean wholesome cooking utensils, good fires, in grates that give no anxiety lest a good fire should spoil the furniture, good table linen, the furniture of the table and the board good of the kind, without ostentatiousness, a well-dressed plain dinner, bespeak a sound judgment and correct taste in a private family, the place it on a footing of respectability with the first characters in the country. *It is only the conforming to our sphere, not the vainly attempting to be above it, that can command true respect from persons of rank and fortune.*

MISCELLANEOUS.

ENTOMOLOGY.

J. S. SKINNER, ESQ.

New Jersey, Aug. 22.

Sir,—I told you, in my remarks of the 7th of July, that I was but little acquainted with the history of the Locust, and that I was not prepared to say any thing conclusively on the subject. It was more to call publick attention to the thing than to make a display of what little I knew. It has answered my purpose; for it has elicited some additional matter from your correspondent, J. W. R. I hope that he and others may continue the investigation, until we have traced the locust through its seventeen years' "destructive career." I must be allowed the latter phrase, for I am still of opinion that the progeny of so many millions of insects must, in various ways, prey on the industry of man.

When I spoke of the "destruction of every green thing by their numbers and voracity," I meant the caterpillars and grubs; for I, as well as those even more ignorant than myself, are aware of the fact that on *peach trees* at least, and I confine myself to those trees, the locust does no other mischief than that of stinging the limbs.

I did not express myself clearly on several other points in my first communication, and I am glad that I have met with such sharp rebuke from your correspondent, J. W. R., as in all remarks that are forced on the publick attention, there should be the greatest attention paid to clearness and brevity. In endeavouring to be brief, I did not convey my opinion distinctly. I now here state, that I alluded to *caterpillars*, or *grubs*, or in whatever form the progeny might issue from the eggs of the locust.

I am perfectly satisfied now, that the female both punctures the tree and lays the egg. I am much indebted to J. W. R. for the valuable fact that he discloses. I have no doubt but that he is correct; for I now recollect that but one locust at a time flew to a limb, but they were so exceedingly shy, that cautiously as I approached them, I never was able to see them deposit their eggs. If, according to my supposition, it were necessary to have the assistance of the male in piercing the limb, they must have gone in couples.

I have no doubt but that the eggs of the locust have already hatched in that particular district in which J. W. R. resides. He is much farther south than I am. But here, even in the exposure of 86° Fahrenheit, the eggs did not hatch, although I observed that in many of the angles, and the locusts here deposited all their eggs in acute angles, as described in the cut accompanying my remarks, there were many empty egg shells, but whether these were imperfect eggs, or whether they had arrived at maturity and had gone in the earth, I could not tell. There is scarcely a day that I do not examine the limbs of a few trees that I have left with the nests on, and I have never yet seen any thing like life. I must believe, therefore, that in situations more northerly than that of J. W. R., many eggs will "lie torpid until spring," or some more suitable time for hatching.

Then again, as it respects the exudation of gum, although I did not go into the minutiae of operation, yet I must insist that I was correct. The point of a pin cannot enter the bark of a tree, particularly of the *peach tree*, without an effort of nature to sheathe the wound with some glutinous secretion. In the case of the locust, the limb is wounded from two to four inches in length.

To heal this long wound, there is an abundance of this fluid ready; and in every instance on my *peach trees*, the healing process began immediately. On many limbs there is no longer any appearance of the acute angles, there is nothing to point them out but the enlargement of the cicatrice. I have

cut the enlargement off from several limbs and have uniformly found the eggs in a healthy state.

In my communication I observed, that "so deeply are the eggs imbedded, that they require no glutinous or downy covering, and that nature, by throwing out gum to protect the wound from the injurious effects of the weather, had superseded the necessity of any further covering for the eggs."

I should not be thus particular in explaining, or rather producing my sentiments again on this small point, but that I fear others may be deterred from publishing their observations if they found that the misconception of a reader, and certainly J. W. R. did not attend sufficiently to the above remarks, would render them subject to be stigmatized as "unqualified asserters," and subject them likewise to ungenerous sneers. But let me not dwell on this part. I am so very anxious to pursue this investigation thoroughly, having much at stake, independently of my love of researches of this kind, that I will not quarrel with the manner in which gentlemen convey their knowledge, even if it be still more unpalatable than that of your correspondent. He has enlightened me on one or two points, and thus far we have a commencement to a true history.

We now know that the insect enters the ground immediately on leaving the shell, that is, if it be suffered to hatch on the ground. We must further learn whether they crawl down from the limb on which they were hatched, or whether they let themselves down to the ground by means of a web, as is the case with many caterpillars and spiders. J. W. R. has described the form of the insect, after it leaves the shell, as being, except in some trifling particulars, "precisely similar to that from which the parent fly issues," and does not doubt "but that such is its destined form when it is hereafter to make its appearance upon the surface of the earth, after having completed its term of years beneath it." No one doubts this. I do not. I only want to know in what shape it remains for sixteen years while under ground, if under ground it remains. It is to this point that I wish the most vigilant search directed.

William Cox, Esq. of Burlington, New Jersey, is one of the most accurate of men, in all matters that relate to the science of agriculture and horticulture, he is one of the most patient investigators I have ever met. I only wish that he would take this matter into his serious consideration. We should then get at the history of the locust in good truth and in acceptable terms. I owe him this publick avowal of my opinion respecting his abilities to prosecute this or any similar work, for the very great benefit I have derived from his *Essay on fruit trees*, a scarce and valuable work; and I wish that you, Mr. Skinner, would encourage the author of this valuable work to print another edition and give us coloured engravings. There is no such work in America. It should be a text book with every orchardist and lover of fine fruit. I do not hesitate to say that I owe almost all my success in rearing trees to his judicious remarks. If he would pursue the subject of the locust, and would from time to time communicate what he discovers to others who are on the same pursuit, we should soon be able to shew the world that farmers and orchardists should be on the alert to exterminate the locusts in all their transformations; for in my opinion they, as well as the beetle or may-bug, do as much mischief above ground as under.

A SUBSCRIBER.

SPORTING OILIO.

DISEASES OF DOGS.

THE RED MANGE.

The disorder called the red mange does not appear to be nearly allied to what is so well known by

the common appellation of *mange*, but to be a species of disease within itself, seated in the skin, and not always infectious amongst dogs lying together, but almost invariably communicated by a bitch to her litter of whelps, particularly if she had it upon her during the time she was in pup. This disorder is most malignant in its effects; the incessant and severe itching, which, from all observation, seems accompanied by a burning heat, and this too increased by the perpetual biting and scratching of the tortured animal, gives such parts of the frame as are severely affected, the appearance of having been scalded by some boiling liquor, with a consequent loss of hair. It is this distinct kind of mange that so constantly baffles dog-doctors and dog-mongers of every description, and reduces them to their *ne plus ultra*, where the fertility of invention can go no further. It is, perhaps, the most deceptive disorder to which any part of the animal world can become unluckily subject; for when it has (seemingly and repeatedly,) submitted to, and been subdued by, some of the combination of combustibles before described, it has as suddenly, as repeatedly, and as unexpectedly, made its reappearance with all its former virulence. Great care, nice attention, and long experience, can discover but one infallible mode of perfect eradication. Let half an ounce of *corrosive sublimate* be reduced in a glass mortar to an impalpable powder; to this, by a very small quantity at a time, add two ounces, (half a gill,) of spirits of wine; and, lastly, one pint of rain or river water, and, with a sponge, dipt in the solution, let every part palpably affected be well washed, every third day, till thrice performed; then leave three clear days, and repeat the former ceremony of thrice as before; letting three *mercurial purging balls* be given at the equal distances of three or four days, and not the least doubt of cure need be entertained, if the mode prescribed is properly and judiciously attended to.

Of the red mange, General Hanger thus speaks: "My dog had the mange; not very bad, but something much worse with it; he had eight or ten large blotches on his body, as big as large hazel nuts. I sent for an old man who had made a livelihood by curing dogs: he took a bottle out of his pocket, and first dabbed the blotches with a bit of tow, each two or three times. He then stopped about five minutes for that to dry in and penetrate; after which he took a pot of ointment, and rubbed the dog in well, for at least ten minutes, under the fore legs, and on the belly, but *particularly on the back bone*. He then desired me not to wash the dog, or let him go into water; telling me that he would call in about five days. When he called, the dog was apparently well: so much so, that he said he did not think it necessary to rub the dog again: however, I made him dab the blotches again, and rub once more in. When he called to be paid, I told him that, upon my honour, if he would discover how the liquid and ointment were made, I would give him two guineas and never discover it till after his death. He consented. The liquid is thus made: half an ounce of quicksilver is put into a bottle, with half an ounce of oil of turpentine, for about eight hours before using it: shake the bottle frequently, and shake it always when you use it, for there will be a sediment at the bottom. The ointment is thus made: take half an ounce of quicksilver; put it into a bottle, with half an ounce of oil of turpentine; let it stand for eight hours, shaking the bottle frequently; then take four ounces of hog's lard, and by degrees mix both together, at a time, till the whole be incorporated. He told me that he always carried two pots of ointment with him, one stronger than the other, in case of a dog being very bad with the mange. The strongest ointment was made with *only three ounces* of hog's lard, but with the same quantity of the quicksilver and turpentine."

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER 8, 1826.

In consequence of a complaint, not uttered in the paper, that we ought not to have inserted some harsh expressions contained in a communication in number 22, we have judged it best to declare our determination to exercise the privilege of striking from any essay, any suggestion, and to modify any expression, which may attract our notice as calculated to wound the feelings of any one. We shall not interfere in the least with any body's argument on the question in dispute; our only desire being to avoid personalities, which, if inadmissible in a political paper are yet much more so in the American Farmer. When gentlemen communicate under their proper names, those who answer them or make remarks upon their communication, will be expected to give their names also, if required, previous to the insertion of their observations.

On the one hand, no writer upon agricultural topics ought to take umbrage when his opinions and judgment, publicly promulgated, are as publicly questioned, if it be done without offensive personal allusions; on the other, it is obvious that no theory, however ill founded it may appear, ought to be questioned in a manner to wound the feelings or to excite, justly, the resentment of its author. So strong and constant is our desire, by a course of strict impartiality, to avoid the least cause of complaint or ill will, that we would sooner relinquish altogether a task in which we have found so much pleasure, than to make enemies of gentlemen with whom we could otherwise live forever on terms of esteem and friendly consideration, flowing from admiration of their liberality, talents and public usefulness.

The next meeting of the Trustees of the Maryland Agricultural Society is appointed to be held on Thursday, the 29th of this month, at the residence of James Swann, Esq. It is expected that the Committee appointed to prepare a scheme of premiums to be submitted to the Trustees, will have it ready for consideration at the time and place above mentioned. The Committee for that object consists of James Carroll, Jr., D. Williamson, Jr. and J. S. Skinner. Any suggestions on the subject from any member of the Society or practical farmer, will be respectfully received and considered by said Committee.

STONE-WARE PIPES,

For conveying water, &c. under ground.

We have lately seen a specimen of stone-ware pipes, made on an improved and ingenious plan, (at least such is the opinion of two of our oldest and most experienced potters, Messrs. Morgan and Amos) calculated to insure uniformity of size, an even surface, with a hard glaze both inside and out, and to which sediment will not adhere; they can be made from one to eight inches in the bore. The inventor is a Mr. Bakewell, who has explained to us his method of joining them together, as well as the cement he uses for that purpose, which appears easy to perform, cheap, and effectual, and it is believed that on his plan they can be made perfectly water tight; and their strength indicates that they will bear a very considerable force or pressure, and as their durability and sweetness surpasses any other substance used for that purpose, and the price of them said to be but little, if any, more than that of wood, there would seem to be every probability that they will prove a valuable acquisition to the planters, farmers, distillers, and others of this country, and especially of the Southern States, in conveying water

(as pure and cold as at the fountain head) to their farm yards, homesteads, and distilleries.

N. B. These pipes can now be had from the stone-ware potters of this city, who will accompany them with an excellent and cheap cement, together with instructions, easily comprehended, how to lay and join them together.

We have also examined the model of an improved brick kiln, invented by the same person; and, as far as our knowledge of combustion extends, we think it bids fair to prove valuable to those brick makers who may adopt it, it appearing very feasible to us that in such kilns the wood will burn to greater advantage than at present, and that bricks may be burnt without either arch or salmon ones. and such also is the decided opinion of the potters above named.

For want of room, we are obliged to postpone the conclusion of the article on raising and making wood.

FROM A SUBSCRIBER—Information wanted as well for the public as for his benefit.

DEAR SIR, Suffolk, Va. Aug. 31, 1826.

May I now ask of you to put a notice in the Farmer, as coming from a subscriber, asking information how to bore for water in sand, and what it would probably cost to bore 14 or 16 feet; for at 14 feet we have a plenty of water, though not good, owing to being brackish, and whether or not, by continuing the search for water, we should probably ever get good water; for we live in a dreadful place for good water. The water I drink I bring from my plantation adjoining town, and it is three quarters of a mile, and could good water be obtained in my lot by boring, it would be a great convenience. I now have a pump, but the water cannot be used, and besides the pump is always out of order; I have determined to move it, and could I obtain water in another place by boring, I should like it. If any of your readers will be so good as to give me, through the columns of the Farmer, information concerning boring for water through sand, I will feel myself under obligation to them.

[We have understood that the Government has failed in attempts to get water by boring at fortress Monroe, and also at Harper's Ferry. In the vicinity of this city attempts by Mr. Disbrow have also failed, as they have yet at Alexandria, where he has gone down 3 or 400 feet. We shall be glad to have the facts in these and in other cases.]

BUST OF CAROLUS LINNÆUS.

We understand that Mr. William Prince, proprietor of the Linnæan Botanic Garden at Long Island, has recently received from Monsieur Thiebaut de Berneaud, Secretary of the Linnæan Society of Paris, a very perfect and beautiful bust of Carolus Linnæus, the immortal projector of systematic botany, and the patron of that Society. Mr. Prince, it will be recollected, and also one of his sons, have been several years since elected members of that society, and this bust will be displayed at the future celebrations of the Branch Linnæan Society of New York. Mr. Prince has also been honoured with a diploma of membership by the Imperial and Royal Academy of Agriculture of the Georgofili at Florence.

[N. Y. Com. Adv.]

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BEEF, Baltimore Prime,	bb.	8 00			
BACON, and Hams, . .	lb.	5	7	9	12
BEEF-WAX, Am. yellow	—	30	31		50
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do. Red, Susque. . .	—	80	83		
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Ruta Baga Seed, . .	lb.	1			
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Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed, . . .	—	3 00		3 50	
Oats,	—	31	33		
Beans, White, . . .	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215			
Do. Country	—	120	130		
HOPS, 1st sort, . . .	lb.	12		25	
HOGS' LARD,	—	7	9	12	
LEAD, Pig	lb.	7			
Bar	—	7½	8		
LEATHER, Soal, best,	—	22	23	32	
MOLASSES, sugar-house	gal.	46	50	62½	75
Havana, 1st qual. . .	—	32	33	37½	
NAILS, 6a20d.	lb.	61		9	
NAVAL STORES, Tar, .	bb.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27		40	
Spermaceti, winter . .	—	70	75	88	
PORK, Baltimore Mess,	bb.	11 00	11 50		
do. Prime,	—	8 50			
PLASTER, cargo price,	ton	3 87½			
ground,	bb.	1 50			
RICE, fresh,	lb.	22	3	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	7½	8	12
WHISKEY, 1st proof, .	gal.	32	33½	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	34	35	50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	8 50	9 25		
Louisiana,	—	8 75	9 75	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	16½		25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	46	47	75	
SHOT, Balt. all sizes, .	clb.	9 00		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 15	1 20	1 50	2 00
Lisbon,	—	1 15	1 20	1 50	1 75
Claret,	doz.	4	8	5 00	8 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinnors' or Pulled, .	—	30	25		

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AGRICULTURE.

ON RECLAIMING MARSH LAND.

By R. G. JOHNSON.

(From the Memoirs of the Philadelphia Agric. Society.)

(Concluded from p. 194.)

OF PARTIAL IRRIGATION.

When meadows have been some time in bank, it is always to be presumed that a considerable portion of them have been brought into good grass, and that even the very high parts may have become too compact, or (as it is called by the farmers,) bound, to yield that productive burden which might be expected from them; wherefore, that the surface of the meadow might again be vivified, or, as it were, brought to life, from that dead state in which it is commonly said to be, when bound, recourse should be had to irrigation. It is a common practice with some of our farmers to let the water on their meadows about New Year's day, and so continue it until the vegetation shows itself in the spring, and when drawn off the surface, they often have the appearance of a beautiful green wheat field. Preparatory to irrigating, the sluices should have doors hung to their in ends, so as to admit the tide, and, by shutting down, to prevent it from running out again. There should also be a number of trunks made from two to three feet square, and a few feet longer than the width of the bank; the number of these trunks should be in proportion to the number of acres to be irrigated, say one to about thirty acres. These trunks are laid in the tide bank opposite the highest parts of the meadow, and on a level with its surface, so that every flood might pass into it from the different parts of the bank at one and the same time, through these trunks and sluices; and on every ebbing of the tide might leave its sediment incorporated with the dead and decaying vegetables of the surface, which, by its daily increasing in quantity augments its weight upon the falling rubbish, and with it affords the richest nutriment to the expected crop of grass. That a farmer might have the benefit of the early crop of good grass, such as timothy or green grass, which might be cut in all the month of June, and also improve the more inferior parts of his meadow by sowing grass seed on such parts as had not taken, he could, on or about the first of July, let the tide on them by the above method, and continue the process until the first of April following. He would then find, that where the rubbish had grown in the greatest quantity, and been beaten down by various causes operating on it, there the sediment (becoming incorporated with it,) had formed a new soil three or four inches in depth, completely adapted for the reception of grass seeds.

This would be the proper time for the farmer to profit by his former mistakes, (in delaying to sow his marsh when first reclaimed,) by immediately drawing off the water and casting his seed with a liberal hand upon the slimy surface of this new formed stratum, composed of putrified vegetables and mud; nor let him forget as the vegetation advances, that, for insuring a good crop of valuable grass, he must have a stock of cattle, the number of which ought to be in proportion to his acres, so as to keep down the superfluous growth of the wild plants.

EFFECTUAL IRRIGATION.

Or drowning the Marsh, as it is called.

After a meadow has been many years in bank, the fine grasses almost all gone, and the surface generally covered with a coarse vegetation scarcely eatable, composed of weeds, rushes, bogs, &c., the farmer then thinks it time to let down the marsh and drown it. This method is performed by cutting away the bank opposite the ditches, and by removing the mud from off the sluices; thus, the water

having a free course through all the ditches, circulates the sediment equally over all parts of the marsh. A period of from five to seven years is considered necessary to produce the desired effect. Within this time there will have formed on the surface of the marsh (on an average,) a stratum of virgin mud, of from eight to twelve inches in depth. Should the marsh be permitted to lie down for eighteen or twenty years, it will then have collected a new stratum of from twelve to twenty-eight inches in thickness. After that length of time, there cannot be perceived any additional accumulation of mud, because the flow of the common tides will be no higher than about on a level with the surface; and I think it would be a certain loss to any farmer to let his marsh continue in its wild state after it had been down for even ten years, for the accumulation of the mud would in no way compensate for the loss of the difference of time, in which profit might have been derived from it in the ordinary manner of mowing and grazing. The first time that wild marsh may have been reclaimed, has never been considered so valuable nor profitable, nor will it so readily receive or retain that system of improvement, as a meadow which had been some years previously in bank, and turned down and sown, and a second time reclaimed and cultivated.

I must here remark, that it is in a great measure owing to practical knowledge in agricultural science (in which some of my neighbouring farmers have displayed their talents in the judicious management of their meadows,) that their zeal has deservedly acquired the applause of the citizens of Philadelphia; and the markets of New York, as well as Philadelphia, will warrant me in saying, that the beef sent from Salem county has never been excelled by that supplied from any other part of the United States; and I have the vanity to believe, that even the best farmers in England have not excelled us.

INTERNAL IRRIGATION.

I can say but little of the salt marshes lying near the sea coast, and which had been periodically covered by the water of the ocean previously to their being reclaimed. There is an opinion generally prevalent, that a certain portion of salt is beneficial to grain and grass: may not too great a quantity of it be also prejudicial? I have often used the pickle from my meat tubs, and with complete success, in the destruction of the St. John's wort, and ranstead, or snap dragon, where they have occasionally appeared on my land. And I am inclined to believe that all perfectly salt marshes, after having been in bank for several years, (and when the native vegetation of the soil have died,) become almost a barren waste, and when exposed to the penetrating rays of the sun, their saline particles are extracted for some inches in depth, so that distinct particles of almost pure salt may be seen on the surface. Indeed, I have seen the salt in such profusion when passing over the marsh, that my shoes would be as white as if walking in a thick hoar frost, and I cannot believe that any soil so highly impregnated with salt can be rendered profitable, for a series of years, in either grain or grass. As I know that some experiments are making to reclaim this highly saturated and almost useless kind of property, I will herewith submit my opinion as to the best mode of preparing this kind of real estate, whereby the owner may calculate on deriving more certain profit from it than is generally received.

So far as I have had opportunities of observing, I have generally seen springs of good fresh water issuing from the uplands and woods, and by the time they have united their numerous rills, they will have formed a creek of considerable size and depth, which, in meandering through the marsh, is discharged into the larger creek or river through the sluices or flood gates. Now nothing appears to me more rational to be done, than that the farmer

should make a right application of this fresh water; which to one thus situated, I consider of the greatest importance. To freshen this reclaimed marsh, so as to make it just brackish enough to produce all the improved kind of grasses, he has nothing more to do than to shut down his inside doors to his sluices or flood gates, and hold the water until it shall have raised in height, so as to cover the surface of the whole marsh: his trunks lying in the bank (as before described,) will then vent all the superfluous water. Let this be done in the fall, and be continued until the following spring, then the water might be drawn off, and grain or grass sown, as suited the fancy of the owner. I have no doubt that in repeating this process for two seasons, the marsh will freshen exceedingly, and otherwise be materially improved. I would also suggest, that throughout the summer, the sluices or flood gates should be attended to, by having boards slid in them; and in the mouths of the ditches, pieces of plank should be set edgewise, so as to keep in all the ditches a certain and continued supply for the cattle, and different kinds of grain and grass which may have been committed to the soil. The height of the water in the ditches can easily be regulated by the number of planks to be put down, the one over the other. Another great advantage to be derived from this process would be, as I have before said, that the weight of water lying for several months on this peaty and light marsh, would tend to compress and render it much more susceptible of receiving the seed to advantage when sown on it.

GRAIN IN MEADOWS.

I cannot say any thing in favour of the different kinds of grain, either from my own cultivation or that of my neighbours. I have known good crops of wheat, rye, corn and oats produced; but yet I have considered the cultivation of grain generally in meadows, as much too precarious for profitable culture. You may sometimes have a beautiful and strong standing crop of wheat or rye on the good blue mud along the bank, or edges of the creek or guts; but it would be no more than a mere slip, with here and there a patch, compared to the residue of the marsh; all the other parts will be nothing but weeds and rubbish. I also consider it a certain waste of time, labour and money, in endeavouring to derive a profit from sowing any kind of grain on the peaty or horse-dung soil; it may vegetate for a while, and produce a show of some straw, but very little, if any grain. I admit that grain has sometimes succeeded on the good blue mud soil, but when you take into consideration that all kinds of grain are uncertain in marsh grounds, and also the hosts of enemies of different tribes which will prey upon it, such as grub worms, mice, and birds without number; and moreover the grasshoppers and cockroaches which attack the grain after it has been reaped, and while in shock, you may readily conclude that the risk of the destruction would be much more probable than a fair calculation for profit.

My judgment, therefore, is, (calculating for a series of years, say six or seven,) that the loss would by far overbalance the profit. In my agricultural pursuits in early life, I was led to believe that the marsh was the very quintessence of nutriment for all plants, and that all kinds of grain might be cultivated there in great perfection. I tried different kinds of grain, and succeeded in causing them to grow; but I remember, not to my satisfaction. I have long been satisfied in my own mind, that the upland was by nature intended for the production both of grain and grass, but that the marshes were designed for grasses only. There can be nothing more true in agricultural science, (according to my estimation,) than that a plough should never enter a marsh soil; we may be assured that the best side of any marsh is uppermost.

I have herein endeavoured to give you my practical observations and opinions in answer to a part of the twelfth inquiry, as stated in the 4th vol. p. 307, of the Memoirs of "The Philadelphia Society for promoting Agriculture." Should any thing I have written, be considered of utility in aiding the advancement of agricultural science, it is entirely at your service.

I am, with great respect, &c.

ROBERT G. JOHNSON.

RICHARD PETERS, Esq.

HORTICULTURE.

ON MAKING WINE.

J. S. SKINNER, Esq. Columbia, S. C., Aug. 27, 1826.

Sir—Having in my last communication of the 20th inst., given you some details on my cultivation of the grape vine, I shall now proceed to the manner of making the wine; at least that which I followed, together with a few observations on the subject. My partiality to this branch of agriculture may make me view it as more important and valuable than it really is. It is certainly of some importance, and if I over value it, it is an error of judgment, and it is the nature of man to err.

The time best adapted for vintage is when the grapes are very fully ripe, and the cultivator ought to avail himself, if possible, of clear dry weather for this purpose. I find that scissors are much more convenient than knives for the gathering of the grapes, which ought to be cut off with as little of the stem as possible; recommending to the gatherers to cut off all the unsound berries, as also those that are too green. This is, I think, better done while gathering than after they have been brought to the vat, as in the latter case, the grapes must be all handled a second time, which is a very troublesome operation when the quantity is great. Care must be taken to gather in one day all that is to be fermented at the same time in the vat. When the grapes are all ready, mash them thoroughly in a box full of small holes at the bottom and sides, placed over the vat and supported there by two pieces across it. This operation is done gradually, mashing only a small quantity at a time, and when sufficiently done, turn it into the vat, and go on so till the whole of the grapes are well and fully bruised; so that, if possible, not one berry—remains entire.

How long the grapes are to remain fermenting in the vat, is a question not easily answered, as it depends on many circumstances: such as the progress and violence, or gentleness of the fermentation, and the object one has particularly in view as to the kind of wine intended to be made. Having been induced by Mr. McCall's (of Georgia,) success, to follow nearly, though not closely, his directions, on the 27th of July I gathered a large kind of coarse, pulpy, black grapes, which we call here "Black Hamburg," of which I had a small quantity. I wished to try it by itself. The juice, or must, weighed by Beam's areometer for syrups, 9°. I added five pounds of good brown sugar, which raised it to 15°, which I thought sufficient. The fermentation proceeded but slowly; I suffered it to go on in the vat for twenty-two hours, when on drawing it off and pressing, I obtained 4½ gallons of must.

On the 7th of August, I gathered my Madeira grapes, which are my chief stock. The few rotten ones, as also the green ones, having been carefully separated. The must or juice weighed 10°, by the same areometer. I then added 102 pounds of sugar, after which it weighed 14½°, with which I was satisfied. The temperature of the atmosphere being comparatively cool, the thermometer ranging in the shade from 75 to 88°, (it must have been somewhat less in my cellar, where my vat was,) the fermenta-

tion went on slowly for fifteen hours, when on drawing off the must, and pressing with a very imperfect press, I obtained 137 gallons of it. It is more highly coloured than that made the three preceding years, owing, I presume, to the superior maturity of the grapes. It appears to me useless to detail the same process by which I made a few more gallons of wine; some with a grape I call (perhaps wrongly,) Red Muscat, and some with our native grape, called here Black Summer grape, which had been some time in a state of cultivation, by which it is, I think, considerably improved. The must obtained from it was very rich, and promises to make a good wine, resembling, perhaps, Port or Claret. The quantity of it made is too small for a fair experiment, being only 3½ gallons.

It appears to me that the use of Beam's areometer is somewhat illusory; for the sinking more or less of the instrument in the must, may depend on other circumstances as much as on the quantity of sugar it contains, whether naturally or by addition. Some grapes that are very pulpy, such are my black Hamburg and red Muscat, yield a very thick juice, into which the areometer will not sink freely; owing, I presume, to the thick mucilaginous substance which it contains. Such grapes are, perhaps, more suitable to make raisins than wine. My aim was, to add about ½ of a pound of sugar per gallon; the quantity of juice I could but guess at, as the sugar was added before the grapes were pressed, that the whole might ferment together, and I guessed nearly right; for, had my press been better, I should have had a few gallons more of juice.

I must observe that the must of the Madeira grapes has fermented in the vat about fifteen hours, which is a longer time than Mr. McCall, of Georgia, allows for his. Yet, had I used my own judgment, I should have suffered it to ferment at least double or triple that time: but I depended on his successful experiment, knowing that no other disadvantage would result from it than the loss of colour, and of a certain astringency, which I think is a good and wholesome quality in wine, when at the same time it adds to its durability, and this is of great importance.

The must was, of course, put in casks, there to continue to ferment until the fermentation had changed the taste of the must from sweet and sugary to sharp and vinous. At first, the bung holes must be but slightly covered. My method is to cover them with two or three grape leaves and load them with sand. This forms a kind of valve, that suffers the gaseous vapours and the froth to escape, without exposing the must, unnecessarily, to a too free contact with the external air. The fermentation went on briskly, and I filled up the casks every other day. This gradually decreased, however, and on the 19th it had considerably subsided, which induced me to put the bungs in the casks, leaving a small hole on one side loosely stopped with a peg. The casks had been previously filled to within a finger's breadth of the top, which is, I fear, perhaps too much.

The filling up of the casks during the fermentation, gives it a fresh spring, and causes the foam to run over; which, I think causes a great waste. I was induced to adopt this method (instead of fermenting within, which is done by filling the casks only to within about three inches of the top, which I know is the practice of many vignerons in France,) by the recommendation of Mr. McCall, not being willing to spare any trouble, and to incur a small loss, to insure success.

With regard to fermenting in the vat so short a time as Mr. McCall does, the best proof of its being a good practice, is the success it had with him. Yet I am fully satisfied that in France the must is, in very few places, if any where at all, suffered to ferment in the vat less than twenty-hours, and in most places from six to ten or twelve days, and even

sometimes more. This is particularly recommended to insure a good colour, body and durability in the wine; and although wine may be injured by fermenting too long in the vat, by acquiring too harsh or other bad taste, particularly if the rotten grapes have not been carefully picked out; yet I am satisfied that there cannot be any danger, if the must is drawn off and pressed out before the fermentation subsides, and the cap falls, (as it is called.) As the fermentation goes on the grapes rise to the top, and form a kind of covering to the rest, (called *le chapeau de la vendange*.) This covering is convex. Now, the must is generally suffered to ferment in the vat (in France,) until this convexity begins to lessen or flatten; but it is thought, and it is, no doubt, improper to wait till it falls entirely; and, to be on the safe side, they had rather take the must from the vat a little too soon than ever so little too late. I believe the wine that has fermented but little in the vat is more delicate; that which has fermented more, but not too much, has a better body, more colour, and is rendered more durable, probably by the astringency it has acquired from the wood of the grape. The latter is also considered more wholesome, and is preferred by connoisseurs.

Although Mr. McCall puts (in my opinion,) too much sugar in his must, Major Adlum puts a great deal more; and I cannot conceive the necessity or propriety of adding 3 pounds of sugar per gallon of must, be it ever so weak, as Major Adlum recommends. I know very well that when the grapes are not sufficiently ripe they do not contain a sufficient quantity of saccharine matter to give a due strength to the wine, and that young vines do not produce as rich grapes as old ones; and that, therefore, it is proper to add to them what they are deficient in. But it seems to me, that by adding 3 pounds of sugar to a gallon of juice that must already contain a considerable quantity of it, is to make a must richer in sugar, I should think, than any that can ever be made any where by merely extracting the juice of very ripe grapes from old vines; unless the grapes have been, previous to pressing, partly dried in the sun, which is sometimes practised to obtain rich *vins de liqueur*, which are only drank occasionally and in very small quantities, and are never used as an every day drink, being too sweet and too luscious for the taste of most people: nor are they considered as wholesome, at least for constant use. As for the notion that some persons have taken up in this country, that there is no wine made in Europe without the addition of sugar, and some add brandy, it is undoubtedly an error; and I can venture to say, that sugar or brandy is never added to the must in France, except it be by experimentalists. I must always except those wines that are manufactured by merchants for exportation, to suit the vitiated palates of those who think wine is only intended to produce a degree of intoxication, and will not admit a wine to be good that will not produce it by a small quantity. No sugar is certainly made use of by the numerous class of vignerons who make nearly all the wine in France; nor is it added by the rich proprietors of vineyards in the making of their wine; and I will venture to assert, that not one-millionth part of the wine drank in that country contains one particle of sugar, other than that which belonged naturally to the grape itself. I know that the addition of sugar has been recommended by experimentalists, when the grapes have not acquired a sufficient degree of maturity, or when an uncommonly wet year has made the grapes too watery. This advice, however, proper as I admit it to be, has never been followed, unless by a very small number of individuals; not by one in ten thousand. As to the addition of brandy, it is never done at all, except, as I have said before, by exporters, to enable some of their wines to bear a sea voyage, and to suit particular tastes.

We ought to remember that brandy is made of wine, and not wine of brandy.

But why should we attach so much importance to the strength of our wines? Are they not strong enough when they can be kept perfectly sound and improving for years? Are we not aware of the injury done to the human constitution by the too free use of strong drinks? Do we not know that temperance conduces to a long and healthful life? Do we see in the wine countries of Europe, where light wines are generally used, dyspepsias, liver complaints, &c., which are committing such ravages in this country? It appears to me that the rational use of wine, is to make it a blessing and not a curse. We show much better our gratitude to a beneficent God, by using that kind gift of his for the very purposes for which it seems to have been intended, viz. to exhilarate our hearts, produce cheerfulness, the parent of health and good morals, and to invigorate debilitated constitutions, &c.

When I began this, I had no intention to finish by moralizing; but my prosing pen would go on, and I suffered it, in the hope that if it did no good, it could possibly do no harm.

As I have in the above occasionally mentioned two gentlemen's names, with whom I somewhat differ in opinions and practice, I beg to assure them and the world, that nothing is farther from my wishes than to detract from their merits or provoke any discussion on this subject, other than that which may promote the good object we all have in view, and that I would not willingly hurt the feelings of any person on earth. I assure them that if I do not agree with them in every thing, I perfectly agree with them in many, and I hope their continued exertions will be crowned with the most complete success. We certainly agree perfectly in the principal object, which is, to induce the cultivation of the vine extensively, make good wine and much of it, and thereby benefit our country in an incalculable degree.

I am, very respectfully, dear sir,

Your obed't serv't,

N. HERBEMONT.

SCIENCE OF GARDENING.

(From Loudon's Encyclopedia of Gardening.)

FUNCTIONS OF VEGETABLES.

Causes of the Sap's Ascent.

By what power is the sap propelled? Grew states two hypotheses: its volatile nature and magnetic tendency, aided by the agency of fermentation. Malpighi was of opinion that the sap ascends by means of the contraction and dilatation of the air contained in the air-vessels. M. De la Hire attempted to account for the phenomenon by combining together the theories of Grew and Malpighi; and Borelli, who endeavoured to render their theory more perfect by bringing to its aid the influence of the condensation and rarification of the air and juices of the plant. Du Hamel directed his efforts to the solution of the difficulty, by endeavouring to account for the phenomena from the agency of heat, and chiefly on the following grounds: Because the sap begins to flow more copiously as the warmth of spring returns; because the sap is sometimes found to flow on the south side of a tree before it flows on the north side, that is, on the side exposed to the influence of the sun's heat sooner than on the side deprived of it; because plants may be made to vegetate even in the winter, by means of forcing them in a hot-house; and because plants raised in a hot-house produce their fruit earlier than such as vegetate in the open air. There can be no doubt of the great utility of heat in forwarding the progress of vegetation; but it will not therefore follow that the motion and ascent of the sap are to be attributed to its agency. On the contrary, it is very well known

that if the temperature exceeds a certain degree, it becomes then prejudicial both to the ascent of the sap and also to the growth of the plant. Hales found that the sap flows less rapidly at mid-day than in the morning; and every body knows that vegetation is less luxuriant at midsummer than in the spring. So also in the case of forcing it happens but too often that the produce of the hot-house is totally destroyed by the unskilful application of heat; and if heat is actually the cause of the sap's ascent, how comes it that the degree necessary to produce the effect is so very variable even in the same climate. For there are many plants, such as the *Arbutus*, *Laurustinus*, and the Mosses, that will continue not only to vegetate, but to protrude their blossoms and mature their fruit, even in the midst of winter, when the temperature is at the lowest. And in the case of submarine plants the temperature can never be very high; so that although heat does no doubt facilitate the ascent of the sap by its tendency to make the vessels expand, yet it cannot be regarded as the efficient cause, since the sap is proved to be in motion even throughout the whole of the winter. Du Hamel endeavours, however, to strengthen the operation of heat by means of the influence of humidity, as being also powerful in promoting the ascent of the sap, whether as relative to the season of the year or time of the day. The influence of the humidity of the atmosphere cannot be conceived to operate as a propelling cause, though it may easily be conceived to operate as affording a facility to the ascent of the sap in one way or other; which under certain circumstances is capable of most extraordinary acceleration, but particularly in that state of the atmosphere which forebodes or precedes a storm. In such a state a stalk of wheat was observed by Du Hamel to grow three inches in three days; a stalk of barley six inches, and a shoot of a vine almost two feet; but this is a state that occurs but seldom, and cannot be of much service in the general propulsion of the sap. On this intricate but important subject Linnaeus appears to have embraced the opinion of Du Hamel, or an opinion very nearly allied to it; but does not seem to have strengthened it by any new accession of argument; so that none of the hitherto alleged causes can be regarded as adequate to the production of the effect. Perhaps the only cause that has ever been suggested as appearing to be at all adequate to the production of the effect, is that alleged by M. Saussure. According to Saussure the cause of the sap's ascent is to be found in a peculiar species of irritability inherent in the sap vessels themselves, and dependant upon vegetable life; in consequence of which they are rendered capable of a certain degree of contraction, according as the internal surface is affected by the application of stimuli, as well as of subsequent dilatation according as the action of the stimulus subsides; thus admitting and propelling the sap by alternate dilatation and contraction. In order to give elucidation to the subject, let the tube be supposed to consist of an indefinite number of hollow cylinders united one to another, and let the sap be supposed to enter the first cylinder by suction, or by capillary attraction, or by any other adequate means; then the first cylinder being excited by the stimulus of the sap, begins gradually to contract, and to propel the contained fluid into the cylinder immediately above it. But the cylinder immediately above it, when acted on in the same manner, is affected in the same manner; and thus the fluid is propelled from cylinder to cylinder till it reaches the summit of the plant. So also when the first cylinder has discharged its contents into the second, and is no longer acted upon by the stimulus of the sap, it begins again to be dilated to its original capacity, and prepared for the intromission of a new portion of fluid. Thus a supply is constantly kept up, and the sap continues to flow. The above is by far the simplest as well as most satisfactory of all theo-

ries accounting for the ascent of the sap. But Knight has presented us with another which, whatever may be its real value, merits at least our particular notice, as coming from an author who stands deservedly high in the list of phytological writers. This theory rests upon the principle of the contraction and dilatation, not of the sap-vessels themselves, as in the theory of Saussure, but of what Knight denominates the *silver grain*, assisted perhaps by heat and humidity expanding or condensing the fluids. (*Phil. Trans.* 1801.) P. Keith considers this theory of Knight as beset with so many difficulties, and the agency of the alleged cause as so totally inadequate to the production of the effect to be accomplished, that of all theories on the subject it is perhaps the least satisfactory.

RURAL ECONOMY.

ON RAISING AND MAKING WOAD FOR THE BLUE VAT.

(From Partridge's Practical Treatise on Dyeing.)

(Concluded from p. 191.)

These mills grind and cut the leaves small, and then they are cast into heaps, where they ferment, and gain an adhesive consistence; they are then formed into balls as compact as possible, and placed on hurdles, lying in a shed, one over the other, with room for air between, to receive from the atmosphere a principle which is said to improve them as a dye, as well as to dry them to a degree proper for being fermented; but in summer these balls are apt to crack in drying, and become fly-blown, when thousands of a peculiar maggot generate, and eat or destroy all that is useful to the dyer. Therefore, they require attention as soon as they are observed to crack, to look them all over well, close them again so as to render them as compact and solid as possible; and if the maggot or worm has already generated, some fine flour lime strewed over it will destroy them, and be of much service in the fermentation. These balls, if properly preserved, will be very heavy; but if worm eaten, they will be very light and of little value. They are then to be replaced on the hurdles, and turned, not being suffered to touch each other; until a month or more after the whole that is intended for one fermenting couch, is gathered in, ground, and balled. And often not until the hot weather of summer is past, to render the offensive operation of turning it, when in the couch, less disagreeable, and not so apt to overheat; and, though temperature herein is necessary, yet a certain degree of heat must be attained, before it is in a proper condition for the dyer's use. This is easily distinguished by a change of smell, from that which is most putrid, and offensive, to one which is more agreeable and sweet, if I may be allowed the term; for few people, at first, either can approve of the smell of woad, or a woad vat; though, when in condition, it becomes quite agreeable to those whose business it is to attend to the vats. Woad is in this state of fermentation more or less time, according to the season, and the degree of heat it is suffered to attain, whether at an early period, or according to the opinion of those who attend the process; but the best woad is produced from a heat temperately brought forward in the couch, until at maturity, and turned, on every occasion necessary, which a proper degree of attention will soon discover.

The balls, when dry, are very hard and compact, and require to be broken with a mallet, and put into a heap, and watered to a due degree, only sufficient to promote fermentation, but too much moisture would retard it; and here is a crisis necessary to be attended to. When the couch has attained its due point, it is opened, spread, and turned, until regularly cooled, and then it is considered in condition for sale, but the immediate use of woad, new fr

the couch, is not advised by dyers who are experienced; for new woad is not so regular in its fermentation in the blue vat. This is the common process. Woad is oftentimes spoiled herein, by people who know nothing of the principles of its dye, following only their accustomed process of preparing it; and hence the difference in its quality is as often seen, as it is in the real richness or poverty of its leaves, from the quality of the land. The process for preparing woad which I have followed, and which I consider beyond all comparison best, is as follows:

Gather the leaves, put them to dry, and turn them, so as not to let them heat, and so be reduced to a paste, which in fine weather children can do. In wet weather my method was to carry them to my stove, and when I had got a sufficient quantity dry, I proceeded to the couch and there put them in a large heap, where, if not too dry, they soon begin to ferment and heat. If too wet, they would not properly ferment, nor readily become in condition for the dyer. These leaves, not having been ground, nor placed in balls on the hurdles, their fermenting quality was more active, and required more attention, and also the application of lime occasionally, to regulate the process with the same kind of judgment as is used in the blue dyeing woad vat. When the heat increases too rapidly, turning is indispensably necessary, and the application of very fine flour lime, regularly strewn over every laying of them; or, if the couch is getting too dry, lime water, instead of common water, applied by a watering pot, may have an equal effect, without loading the woad with the gross matter of the lime; though I conceive that the gross dry flour lime, and the oxygen of the air, will furnish* more carbonic acid gas to the woad, and retain such principles as are essential to a better effect. For I have experienced, that woad which requires the most lime to preserve a temperate degree of fermentation, and takes the most time, is the best; so that at length it comes to that heat which is indispensable for the production of good woad.

In this couch it is always particularly necessary to secure the surface as soon as the leaves begin to be reduced to a paste, by rendering it as smooth as possible, and free from cracks. This prevents the escape of much carbonic acid gas, (which is furnished by the lime and the fermentation,) and also preserves it from the flies, maggots, and worms, which often are seen in those parts where the heat is not so great, or the lime in sufficient quantity to destroy them. It is surprising to observe what a degree of heat they will bear. This attention to rendering the surface of the couch even and compact, is equally necessary in either process; and also to turning the woad exactly as a dung-heap, digging perpendicularly to the bottom. The couching house should have an even floor, of stone or brick, and the walls the same; and every part of the couch of woad, should be beaten with the shovel, and trodden, to render it as compact as possible.

The grower of woad should erect a long shed in the centre of his land, facing the south, the ground lying on a descent, so as to admit the sun to the

back part; and here the woad should be put down as gathered, and spread thin at one end, keeping children to turn it towards the other end; therefore it will be necessary to know how long the shed should be; but this can be erected as you gather, and then it will soon be known. Good woad, such as the richest land produces, if properly prepared, will be of a blackish green, and mouldy, and when small lumps are pulled asunder, the fracture and fibres are brown; and the more stringy they are, and the darker the external appearance, and the greener the hue, the better the woad; but poor land produces it of a light brownish green. The fibres only serve to show that it has not suffered by putrefaction.

For the use of the dyer, the balls require a further preparation. They are beaten with wooden mallets, on a brick or stone floor, into a gross powder, which is heaped up in the middle of the room, to the height of four feet, a space being left for passing round the sides. The powder, moistened with water, ferments, grows hot, and throws out a thick and fetid fume. It is shovelled backward and forward, and moistened every day for twelve days; after which it is stirred less frequently, without watering, and at length made into a heap for the dyer.

Such is the account which has been published of the manner of raising woad, and manufacturing the plant by Mr. Parish. I was well acquainted with Mr. P.; he was an excellent dyer and made a great many experiments, and his process of making woad was much spoken of by other dyers, as being a great improvement. It serves to show that a considerable latitude may be observed in the process, without injuring the article; and this will be further proved in my own process, as follows:—

The land on which I raised woad in Providence, Rhode Island, was none of the strongest, though it was in tolerable good condition, and I had it well manured. It was ploughed twice and harrowed each time. The seeds were planted in hills about three feet apart, five seeds in each hill; this was done as early as the season would permit, and it came up very fine, scarcely a seed failing. To facilitate the planting, I had a board cut four feet in length, and nine inches wide; at one end I put in five short pegs, that projected two inches from the board on the underneath part, the pegs being four inches apart. A handle was inserted in the middle of the board, of sufficient length to enable the person who worked with it to stand upright; by this means he could walk over the ground, measuring the distance as he went along, at the same time that he made the holes for the seeds; and this he was enabled to do as fast as two persons could plant them.

The wire-worm destroyed a few of the plants at first; but these I soon got under, by looking after and killing them of mornings, and by working in fresh slacked lime around those hills that had not been attacked. The plants were kept clean by hoeing, and they grew very rapidly. The first crop was ripe by the latter end of June; I had it gathered and spread upon all the unoccupied floors of the factory, and on sheets out of doors, where it lay, and was turned, until half dry, when it was conveyed to the dye-house, and there cut with sharpened spades in tubs, until it was sufficiently adhesive to work into balls; these were made with the hands, and were laid to dry on a large floor over the steam engine. In the early part of the drying, maggots, from fly-blows, were engendered in great numbers, and I was much troubled to keep them under; to effect this, I rolled them in fine, fresh, dry slacked lime, and it never failed to destroy them. When I had dry balls enough, they were put in hogheads, and pounded in as close as possible, and covered down. When a hoghead was filled, I had them closely covered, until the cold weather of autumn

would permit their being fermented with safety, when all the crops were mixed together.

I had five crops off the land that season, and another in the following spring; for the plants grew very rapid after the first cropping, which was much increased by plentiful showers happening to fall immediately after each gathering. When the leaves are nearly ripe, a round ring will appear near their ends, and a purple spot in the interior of the ring; soon as these assume a brownish hue, the leaves must be gathered.

It must be observed, that I laboured under every disadvantage in manufacturing the woad, so as to make it fit for dyeing; the crops were good, and considering the quality of the land, and other impediments, it worked better than I had any reason to expect. Having made it myself, I was not restricted in the consumption, and I made up for the quality by using an additional quantity.

I have seen a good deal of woad raised and manufactured in England, and I am convinced that where land of the first rate quality can be obtained, and proper attention be paid to cultivating and manufacturing, it may be raised and made in this country in the utmost perfection. It is an annual crop well worth the attention of any enterprising American farmer, who has land of the quality wanted, and sufficient capital to erect sheds and machinery for working it. The mill used for grinding the leaves, is like the cider-mill that grinds with a rolling stone, or iron ring, in a circular trough, with this difference, that the woad-mill has knives following the roller, which cuts the plant as it moves round: this, with a shed and a couching room, are all that is needed to commence the business.

The demand for woad will be improving as the manufactures increase; and those who have been using the ash vat, are changing for the woad dye, this also will increase the demand. There is none made in the country at the present time, in a regular way, so that any person who will undertake to establish the business, and make an uniform prime article, may calculate on its becoming an article of considerable magnitude, attended with a liberal remuneration.

INTERNAL IMPROVEMENT.

CHESAPEAKE AND OHIO CANAL.

(From the National Intelligencer.)

A most interesting table of the dimensions of the Chesapeake and Ohio Canal, illustrated by transverse profiles of the canal and tunnel, was received from the Engineer department, and laid before the committee.

It is one of the tables which will constitute part of the report of the Board of Internal Improvement, and, with the report itself, may shortly be expected by the public. From this table we have made the subjoined extracts, not being provided with forms for printing the profiles.

The Eastern section includes a short interval between tide water and Georgetown, not comprehended in the charter, and extends from Georgetown to Cumberland, 186 miles, with a lockage of 578 feet, distributed among 79 locks. It is estimated at \$1,177,081 dollars, on the principles before stated, and more fully illustrated by the subjoined table.

The Middle section, extending from Cumberland to the eastern end of the summit level, 29 miles and 240 yards; and thence, with that level, from the upper lock of the eastern portion to the upper lock of the western portion, a distance of five miles and 1230 yards; and, thence from the western end of the summit level to the mouth of Casselman's river, a distance of 35 miles and 1250 yards, being in all 70 miles and 1010 yards, is estimated at 10,028,122 dollars, embracing a lockage of 1335 feet ascent, and 636 descent. Of this sum, \$471,967 dollars is

* The lime is dry slacked, and is used before it can have absorbed carbonic acid gas. Therefore, Mr. Parish must have been mistaken in the theory of this operation. The oxygen of the atmosphere combines with the colouring matter of woad while fermenting, and carbonic acid gas is a product of fermentation; consequently, the lime, instead of supplying that gas, facilitates and regulates the operation, by combining with it.

† It is truly surprising how readily persons, otherwise correct, can produce theories so absurd. Unburnt limestone is a carbonate, but when burnt, and fresh slacked, it does not afford carbonic acid gas; but will enter into combination with it very greedily.

allowed for the summit level of 5 miles 1290 yards, embracing the tunnel of 4 miles 80 yards. The locks, in this section, are in number 246.

The Western section, beginning where the last ends, and extending 85 miles and 220 yards, with a descending lockage of 619 feet, distributed among 78 locks, is estimated at 4,170,223 dollars.

The summary, affording a distance of 341 miles and 1290 yards, with an ascent of 1903 feet and a descent of 1255 feet, distributed among 403 locks, and an estimate of 22,375,426 dollars.

In this estimate, the locks are computed at 12,000 dollars each. The dimensions of the locks are, in length, 102 feet, in width, in the clear, 14 feet, with a lift, on an average, of 8 feet each, being designed for boats 94 feet long and 13½ feet broad.

The breadth of the canal, at the water line, is 48 feet, at the bottom 33 feet, with a depth of 5 feet from the water line. The tow path is nine feet broad, and, added to the lateral surf-berms, slopes, guard bank of 5 feet, and parallel drains, occupy, including the canal, a breadth of 102 feet, in level cutting.

The estimate of the tunnel is founded on three hypotheses: 1st, hard clay; 2d, slate rock and sand stone; and, last, granite and unstratified lime stone. The respective amounts being, for the 1st, 3,344,420; for the 2d, 3,278,984, being that adopted; and, for the last, 3,727,849.

The greatest elevation of the ridge, above the water line of the tunnel, is 851 feet.

The charter of the Chesapeake and Ohio Canal contemplated an extension of the Eastern section along the Potomac, beyond Cumberland, to the mouth of Savage river, and the Table supplied by the Board of Engineers, gives, for the distance between Cumberland and the mouth of Savage, 30 miles and 550 yards; for the ascent 312 feet, which the table distributes among 39 locks. The cost of this extension, of the canal, having the same dimensions, and being grounded on the same principles, they compute at 1,794,963 dollars.

The profile of the tunnel exhibits a canal, surrounded by a brick wall, of an elevation from the water line of 16½ feet, and a descent below it of 7 feet, in the clear. The surrounding brick wall is two feet thick, with a projecting tow path from the side, of the breadth of four feet. The greatest breadth of the tunnel, in the clear, is 22 feet, the breadth of the canal, at the water line, deducting the tow path, is 18 feet. The tow path rests on a foundation of brick.

The estimates of the Board of Internal Improvement are so framed, that they can be accommodated to any given price of materials and labour, and, if reduced according to the terms of the actual contracts, referred to in the letters of Messrs. Denny and Craft, and of Mr. Stewart, would bring the cost of this great work within the sum of ten millions of dollars. Of this, however, a few weeks will furnish better evidence, when the entire report of the Board of Internal Improvements will be laid before the public.

Prices of the main articles, upon which the estimate of the Board of Engineers is predicated.

One cubic yard, sand and clay, excavation and transportation to 40 yds included	\$0 13 6
Do hard clay do do	0 17 0
Do quicksand and mud do do	0 20 4
Do soft slate do do	0 20 4
Do hard slate do do	0 27 6
Do slate rock do do	0 34 3
Do do requiring blasting do do	0 69 3
Do primitive limestone and granite, requiring blasting do do	0 94 3
Do do in a confined and contracted space, excavation only	1 00 0
A square yard of puddling, 8 inches thick	0 12 4
One cubic yard of brick wall for the tunnel, hard bricks, of superior quality	8 36 2

One cubic yard of brick arches for the tunnel, hard bricks, of superior quality	10 38 2
One cubic yard of stone masonry, the lime and stone of best quality	5 85 8
One cubic yard of dry wall, made of large size rubble stone	4 02 3
One cubic yard of dry wall, the stones found on the spot	3 00 0
One cubic yard of hewn sand stone, for blocks not exceeding 9 cubic feet content	13 50 0
Do do for blocks exceeding 9 cubic feet content	21 94 0
Do of hewn limestone, for blocks not exceeding 9 cubic feet	16 87 5
Do do for blocks exceeding 9 cubic feet	27 00 0
A square foot, cutting to the point, sand stone	0 08 0
Do do to the chisel do	0 12 0
Do do to the point, lime-stone	0 18 2
Do do to the chisel do	0 26 4
One cubic yard of the setting of hewn stone, with common mortar	5 29 0
Do of do with water cement	7 96 0

LADIES' DEPARTMENT.

MANAGEMENT OF FAMILIES.

(From the Introduction to Mrs. Holland's Complete Economical Cook.)

COOKING UTENSILS.

The various utensils used for the preparation and keeping of food are made either of metal, glass, pottery ware, or weed; each of which is better suited to some particular purposes than the others. Metallic utensils are quite unfit for many uses, and the knowledge of this is necessary to the preservation of health in general, and sometimes to the prevention of immediate dangerous consequences.

The metals commonly used in the construction of these vessels are silver, copper, brass, tin, iron, and lead. Silver is preferable to all the others, because it cannot be dissolved by any of the substances used as food. Brimstone unites with silver, and forms a thin brittle crust over it, that gives it the appearance of being tarnished, which may be accidentally taken with food; but this is not particularly unwholesome nor is it liable to be taken often, nor in large quantities. The discolouring of silver spoons used with eggs arises from the brimstone contained in eggs. Nitre or saltpetre has also a slight effect upon silver, but nitre and silver seldom remain long enough together in domestic uses to require any particular caution.

Copper and brass are both liable to be dissolved by vinegar, acid fruits, and pearl-ash. Such solutions are highly poisonous, and great caution should be used to prevent accidents of the kind. Vessels made of these metals are generally tinned, that is, lined with a thin coating of a mixed metal, containing both tin and lead. Neither acids, nor any thing containing pearl-ash, should ever be suffered to remain above an hour in vessels of this kind, as the tinning is dissolvable by acids, and the coating is seldom perfect over the surface of the copper or brass.

The utensils made of what is called block tin are constructed of iron plates coated with tin. This is equally to be dissolved as the tinning of copper or brass vessels, but iron is not an unwholesome substance, if even a portion of it should be dissolved and mixed in the food. Iron is therefore one of the safest metals for the construction of culinary utensils; and the objection to its more extensive use only rests upon its liability to rust, so that it requires more cleaning and soon decays. Some articles of food,

such as quinces, orange peel, artichokes, &c. are blackened by remaining in iron vessels, which therefore must not be used for them.

Lead vessels are very unwholesome, and should never be used for milk and cream, if it be ever likely to stand till it became sour. They are unsafe also for the purpose of keeping salted meats.

The best kind of pottery ware is oriental china, because the glazing is a perfect glass, which cannot be dissolved, and the whole substance is so compact that liquid cannot penetrate it. Many of the English pottery wares are badly glazed, and as the glazing is made principally of lead, it is necessary to avoid putting vinegar, and other acids into them. Acids and greasy substances penetrate into unglazed wares, excepting the strong stone ware; or into those of which the glazing is cracked, and hence give a bad flavour to any thing they are used for afterwards. They are quite unfit therefore for keeping pickles or salted meats. Glass vessels are infinitely preferable to any pottery ware but oriental china, and should be used whenever the occasion admits of it.

Wooden vessels are very proper for the keeping many articles of food, and should always be preferred to those lined with lead. If any substance has fermented or become putrid in a wooden cask or tub, it is sure to taint the vessel so as to make it liable to produce a similar effect upon any thing that may be put in it in future. It is useful to char the insides of these wooden vessels before they are used, by burning wood shavings in them, so as to coat the insides with a crust of charcoal.

As whatever contaminates food in any way must be sure, from the repetition of its baneful effects, to injure the health, a due precaution with respect to all culinary vessels is necessary for its more certain preservation.

(To be continued.)

ADDRESS TO DOMESTIC HAPPINESS.

By COWPER.

Domestic Happiness, thou only bliss
Of Paradise, that hast surviv'd the fall!
Though few now taste thee unimpair'd and pure,
Or tasting long enjoy thee! too infirm,
Or too incautious, to preserve thy sweets
Unmix'd with drops of bitter, which neglect
Or temper sheds into thy crystal cup;
Thou art the nurse of Virtue, in thine arms
She smiles, appearing, as in truth she is,
Heav'n-born, and destin'd to the skies again.
Thou art not known where Pleasure is ador'd,
That reeling goddess with the zoneless waist
And wand'ring eyes, still leaning on the arm
Of Novelty, her fickle, frail support;
For thou art meek and constant, hating change,
And finding in the calm of truth-tried love
Joys, that her stormy raptures never yield.
Forsaking thee, what shipwreck have we made
Of honour, dignity, and fair renown!
Till prostitution elbows us aside
In all our crowded streets; and senates seem
Conven'd for purposes of empire less,
Than to release th' adul'tress from her bond.
Th' adul'tress! what a theme for angry verse!
What provocation to th' indignant heart,
That feels for injur'd love! but I disdain
The nauseous task, to paint her as she is,
Cruel, abandon'd, glorying in her shame!
No!—let her pass, and, chariotted along
In guilty splendour, shake the public ways;
The frequency of crimes has wash'd them white,
And verse of mine shall never brand the wretch,
Whom matrons now of character unsmirch'd,
And chaste themselves, are not sham'd to own.
Virtue and vice had bound'ries in old time,
Not to be pass'd: and she, that had renounc'd
Her sex's honour, was renounc'd herself

By all that priz'd it; not for prud'ry's sake,
But dignity's, resentful of the wrong.
'Twas hard perhaps on here and there a wail,
Desirous to return, and not receiv'd:
But was a wholesome rigour in the main,
And taught th' unblemish'd to preserve with care
That purity, whose loss was loss of all.
Men too were nice in honour in those days,
And judg'd offenders well. Then he that sharp'd,
And pocketed a prize by fraud obtain'd,
Was mark'd and shunn'd as odious. He that sold
His country, or was slack when she requir'd
His ev'ry nerve in action and at stretch,
Paid with the blood, that he had basely spar'd,
The price of his default. But now—yes, now
We are become so candid and so fair,
So lib'ral in construction, and so rich
In Christian charity, (good-natur'd age!)
That they are safe, sinners of either sex, [bred,
Transgress what laws they may. Well-dress'd, well-
Well-equipag'd, is ticket good enough,
To pass us readily through ev'ry door.
Hypocrisy, detest her as we may,
(And no man's hatred ever wrong'd her yet.)
May claim this merit still—that she admits
The worth of what she mimics with such care,
And thus gives virtue indirect applause;
But she has burnt her mask not needed here,
Where vice has such allowance, that her shifts
And specious semblances have lost their use.

TO YOUNG WIVES.

[When number 22 was published, the Editor and the Printer of the Farmer were absent, and a piece headed "ELEGANT EXTRACT," page 182, was so incorrectly printed from a not very legible manuscript, that we deem it proper, from the work itself, which was then fast locked in our library, to copy in this number the passage referred to, preceded by a few more lines from the same poem.]

"L'homme ne sait aimer qu'autant qu'on s'ait lui
Etudiez son caractère: [plaire:
Ménagez-lui le prix de la moindre faveur;
A l'orgueil, à l'humeur, opposez le sourire,
L'innocence au soupçon, le calme à la fureur;
Régnez en suppliant, et fondez votre empire
Sur l'amour et sur la douceur.
Un jour, Cypris, vous serez mère:
N'abandonnez jamais le fruit de vos amours
Aux mains d'une mère étrangère.
Nourrissez votre fils; remplissez vos beaux jours
Des soins intéressants de ce saint ministère.
Ces jours pour le plaisir ne seront point perdus.
La nature, aux bons cœurs, donne pour récompenses
Des devoirs les plus assidus
Les plus douces des jouissances.
Vous les mériterez: de votre nourrisson
Une autre n'aura pas la première caresse:
Vous jouirez avec ivresse
Des prémices de sa tendresse
Et des éclairs de sa raison.
Souvent, tandis que de sa mère
Ses lèvres presseront le sein,
En admirant son minois enfantin,
Vous croirez démêler quelques traits de son père.
Alors vous sentirez palpiter votre cœur
Du plaisir de trouver l'auteur dans son ouvrage,
Et de l'espoir de voir croître sous votre ombrage
Le fruit dont vous aurez alimenté la fleur."

MISCELLANEOUS.

TO EMIGRANTS AND FARMERS.

Advantages of Maryland as a place of settlement.

While the whole tide of emigration to our country from abroad, flows towards the new states in the west, and our own Atlantic brethren follow the stream, the facts which are about to be named seem to be forgotten or overlooked. The western lands are strong and good, are very cheap, and may be

bought at the government prices. But they are to be cleared and fenced, houses are to be built, markets to be created, society to be formed, and every thing to be done, before comfort can reward excessive labour.

Land is now cheaper in the state of Maryland than it is in the vicinities of any good settlements in the west. Good land may be bought in abundance within 20 miles of Baltimore, in any direction, at \$4 to 4.50 per acre. There are good roads and mill seats in all directions in the same district of country. There are manufactories of various sorts, who want a denser population, as weavers and mechanics, and live-stock, and vegetables, and fruit, and cider, are wanted at Baltimore and Washington city. Slave labour has become unprofitable, and is scarcely practised within this limited district. The writer knows of many farms which, with houses and barns, fences, &c. and delicious springs of the purest water, can be purchased at the price of the land, i. e. at \$4.50 per acre.

Lands thus situated, with an outlet to the Chesapeake bay, to Baltimore, or to the seat of the general government, in the midst of a settled country, at the centre of the union, in the (by adaptation) natural soil of the vine, the tobacco plant, the peach, apple, wheat and Indian corn, are to be bought every day for cash, in lots to suit purchasers; and \$500 in ready money will settle a family on a farm with all needful buildings, containing 80 to 100 acres, and leave a surplus for tools and stock.

There are free schools all over the state. The state is also rich in United States' and other stocks, and the income arising therefrom, almost pays the expenses of state government; so that the taxes are less than in any state in the union.

It is commonly said that the soil is poor and exhausted. This is not true. The soil is capable of producing all that any soil in this country can produce by judicious cultivation. The soil in many places has been abused, but can be and is daily restored to its former goodness by the influence of increasing knowledge in agriculture.

It is well known that by the operation of natural causes, such as the reduced prices of produce, and the increased white population here, that slave labour is unprofitable, and is going out of use. It is only in Prince Georges' county, and in some districts on the Eastern Shore, where the soil is so good, and the management so able, as to outweigh the real extravagance of slave labour, that it yet remains in much use. This soon will correct itself, and slave labour is now unprofitable, i. e. dearer than any other sort of labour which can be applied to lands in Maryland; and wherever white labour competes with it, it undersells it, and drives it out in all temperate climates. Thus if the man who possesses 50 negroes, sells them, and invests the proceeds in U. States' six per cents. and cultivates only what land 5 hired white men can tend, his dividends and the results of this hired labour will outweigh the results of the labour of the negroes, after deducting their support. The truth of this statement is made clear by the disuse of slave labour, not only here, but in Virginia also, to a considerable extent.

The right of suffrage is universal in Maryland; the roads are among the best made ones in the country, and are the great avenues to all parts of the union. There are towns, churches, mild laws, free schools, toleration for all sorts of religions and politics, no religious tax, the climate of the south of France, proximity to two great cities, cheaper lands, and better apparent profits to industry than appear to us to offer themselves to industrious farmers and emigrants, in any other quarter of our wide spread land.

TRANSPORTATION.

It takes thirty days to transport goods from Philadelphia to this place, and costs five dollars per

hundred. From New York city to this place twenty days, and costs two dollars and fifty per hundred. Difference one half in expense—or, a saving in the transportation of five tons of merchandise from the city of New York, of the sum of two hundred and fifty dollars; in addition to which they are conveyed in two-thirds of the time from New York that they are from Philadelphia. Allowing our merchants to bring on goods twice a year, and averaging five tons at a time, it will be a saving of five hundred dollars each, per year. When our canal shall have been completed to the Lake, the expense will be somewhat less. [Ohio State Journal.]

SPORTING OLIO.



SALE OF BLOOD HORSES.

The sale of horses belonging to the estate of the late THEO. FIELD, Esq., for some time past advertised in this paper, took place on Friday last. The correct judgment and skill of the deceased in selecting and rearing the best stock, together with the high reputation acquired by some of them as racers, attracted hither from a distance, a number of the gentlemen of the turf. In order to show how highly these horses were appreciated, we have thought proper to give the account sales of several.

Gohanna, a fine blood bay horse, upwards of 16 hands high, \$3500—Phillis, full sister to Gohanna, \$1654—Merino Ewe, sixteen years old, now in foal by Archie, the dam of Gohanna and Phillis, \$1205—a Bay Filly, twelve months old, \$357—a Sorrel Filly, four months old, \$500, also the offspring of Merino Ewe—Calypso, Archie mare, \$265—Lady Botts, grey mare, \$150. Producing the handsome total of \$7959—and averaging \$994.87½ cents each. We understand that none of the purchasers reside out of the state. VIRGINIA IS STILL HERSELF.

[Petersburg Intelligencer.]

CUB MARE.

J. S. SKINNER, Esq.

September 4, 1826.

Sir,—A little before, or after the year 1790, a bay mare, brought from New York or New Jersey, said to have been got by Doctor Hamilton's imported horse Figure, appeared upon the Maryland turf, and ran with great success. She was somehow under the direction of Gabriel Christie, Esq., of Havre-de-Grace, and others; was a light bay, with more of the brown than yellow in her colour, with mealy legs, but had not, I think, any white marks; she had great length, and fine form, but could not have measured more than fourteen hands; and she was known and distinguished by the name of *The Cub Mare*.

What became of this mare I never heard; but I do know, that very soon after her appearance, the same northern sportsman became possessed of Col. Good's celebrated horse Flag of Truce, the sire of Leviathan. The Cub mare ran as aged, but how old she was I cannot say. Her dam may have been got by Widair out of the imported Cub mare. May not Flirtilla be from the stock of this mare?

Old Figure ran well in England and Scotland, and beat Mr. Galloway's Selim in Maryland. The last time I saw him was in Philadelphia, in the year 1774, but do not know when or where he died. These hints will stand for what they are worth. F.

DOGS.

[It gives us pleasure to record the addition which has been made to the existing stock of these faith-

ful and useful animals, by the importation, in the Belvidera, to this port, of a couple, male and female, of genuine bull-terriers, of the most famous stock in England—as appears by the following extract of a letter to the gentleman to whom they were sent:]

"I have succeeded in procuring, and now send you in the Belvidera, a *prime* dog and bitch of the genuine Terrier and Bull Dog breed.

"The dog was bred by ———, a member of Parliament for Newton, and was got by the celebrated dog Billy, who won a wager of 100*l.* by killing rats in London. The bitch by one of the dogs that baited the lion at Warwick; and both out of celebrated fox terriers. The dog is fifteen and the slut twelve months old."

[We rode out to see these dogs soon after their arrival, and expect to present to the readers of the Sporting Olio, an engraving of the son of the renowned BILLY, whose feats are well known to the readers of the English Annals of Sporting. The following, amongst others, will give the reader an idea of one of the *spectacles* which are gotten up for the amusement of the sober people of England, and a specimen of the slang phrases used in the description of them:]—

"*Rat murder*, by authority.—One hundred lives lost in twelve minutes, at the Westminster Cockpit, Tufton street, on Tuesday, Sept. 3, when the phenomenon dog, Billy, the property of Mr. Dew, will exhibit his wonderful, peculiar, and almost incredible, method of rat-killing, for a stake of twenty sovereigns.

"Such were the terms of the invitation to see this performance, which attracted a full attendance of the most distinguished characters among the fancy, from all parts; nearly two thousand persons, at a bob a nob, having crowded the pit at an early hour, including the high toby gloaks, swells, and tulips of the first order, many bringing their own tykes to view the slaughter, and to profit by the example of Billy. A score of carriages, coaches, curricles, gigs, chaises, besides carts, buggies, drags, and things without number, enlivened the purlieus, and gave a smack to the sports; even the Jarvies and Johns outside 'went a trifle' upon the event, taking the *cue* from their employers, each considering his own master as the most knowing of the lot within. Altogether, many hundreds of pounds were laid on the match.

"Billy, seconded by his owner, and the rats, by Cheetham, now entered the area of the pit, (12 feet square,) and we expected to have seen the rats let go singly with room to get away, and laid our blunt accordingly; but they were put in all at once, and Billy had easy work of it, despatching the entire hundred in seven minutes and forty seconds, a grip a piece sufficing to despatch the varments. Loud huzzas from the winners crowned the feat, and drowned the remonstrances and maledictions of the losers. Billy having been regaled with drops of eye water, and decorated with ribbons, reappeared, and the lot (pros and cons,) repaired to the Hoop and Grapes, to grub a bit of the hollow, and some of the substantial, washing their masticores with drops of the juice, and miscivium of sweets and sour, strong and weak,—punch to wit. Upon this occasion, Master Dew showed particularly jolly, chaffed *fifty* as the price of his Billy, and, if we understood him rightly, he proposed to fight any dog of his *no* weight, for fifty sovereigns—a sum too mighty for those coves who own the best dogs."

[The use of the terrier is well known to be that of a guard to the house, especially in the country, against destructive vermin—such as rats, weazles, minks, &c. Terriers are distinguished as *rough* and *smooth*, and vary considerably in size. In Eng-

land, of late years particularly, terriers have been crossed with the bull-dog, to increase their fierceness and power in fighting.

The dog imported in the Belvidera is of the race of *smooth* terriers, deriving a touch of the bull-dog blood from Billy, his sire.

We contemplate procuring engravings to be published, with a sketch of the natural history and uses of the various races of dogs, most of which are now to be had in this country in a high state of cultivation.

"Alas! and so my friends dropt off
Like rose leaves from the stem;
My fallen state but met their scoff,
And I no more saw them!

One friend, one honest friend remain'd
When all the locusts flew;
One that ne'er shrunk, nor friendship feign'd—
My faithful Dog, 'twas you."

DISEASES OF DOGS.

THE COMMON MANGE.

This disorder is very infectious, and originally proceeds from dirty beds, bad food, and filth in general. It has a loathsome, scabby, dirty appearance, somewhat similar to the itch in human beings; and, like that disease, contains animalcula in each of the pustules. It may be cured with the following:

Oil of tar,
Sulphur vivum,
Train oil; of each an equal quantity,

with which the dog should be well rubbed several times, a day or two elapsing between each rubbing. Sulphur, given internally, will be of service.

Another:—

Flowers of sulphur, half an ounce,
Hogs' lard or butter, one ounce;

well mixed and rubbed completely over the animal twice a day, giving a tea spoonful of the flowers of sulphur every evening in a little molasses. Keep the animal confined alone, and the moment the cure is effected, give him a clean bed. As the disease is very infectious, without great care, all your dogs will become disordered.

Mercurial ointment rubbed on the parts affected will remove this disease; but it is rather a dangerous remedy, and will kill a weak animal, if not carefully administered: muzzle the dog.

An infusion of fox-glove leaves, I have reason to believe, will answer the purpose: it is the cleanest remedy; and though I have not had sufficient experience to pronounce its infallibility, I have no hesitation in recommending it. Put a handful of fox-glove leaves into a quart or three-pint jug, pour boiling water upon them; and, when cold, rub the dog every day for three or four days. The dog need not be muzzled—as soon as dressed he will attempt to lick, but will not take a second taste.

The following I have seen successfully used:

Sulphur, two ounces,
Mercurial ointment, two drams;
Hogs' lard, four ounces;

well mixed; with which rub the dog every other day. Three or four dressings will generally be sufficient. Two drams of aloes, mixed up with the above, will not injure the composition, and will probably prevent the animal licking himself—otherwise, muzzle him.

FOR DISTEMPER IN DOGS.

The following has been recommended with confidence: To a dog eight months old, give 4 grains of Turbeth's mineral, and keep him from water 24 hours; then give him 4 grains of crocus metallorum, and turn him out.

RECIPES.

TO CLEAN ORANGE COLOUR ON SILK, COTTON, AND WOOLLEN.

If it is a silk garment, it must be cleaned with a solution of soap, no matter what sort, and in the second liquor pearl-ash must be used to stay the colour. The water must be used much under a hand heat for silks. If requiring more to scarlet, or redder, then the pearl-ash must be omitted, and a little vinegar used in the rinsing water. See the mode of cleaning of coloured woollens in the following pages, recollecting that acids heighten the red colour, and alkalies make it more upon the buff.

OF CLEANING BLACK SILK.

If this is a slip, unpick the seams; take one piece at a time and put it on a table, then take a pennyworth of bullock's gall, and boiling water sufficient to make it pretty warm, dip a clean sponge in the gall liquor, and, washing your sponge in a pan of warm water, after dipping it into the liquor, rub the silk well on both sides, squeeze it well out, and proceed as before. Then hang up this piece of silk, and clean the others in the like manner. When the whole are done, immerse them altogether in a pan of spring water, to wash off the dirt which the gall has brought upon the surface of the silk; change your rinsing waters till they are perfectly clean, and, after washing, dry your silks in the air, and pin them out on a table, &c. first dipping a sponge in glue-water, and rubbing it on the wrong side of the silk. Dry it near the fire, and it will be as new.

A METHOD OF CLEANING CHINTZ BED AND WINDOW FURNITURE, SO AS TO PRESERVE THE GLOSS AND BEAUTY.

This will generally answer where the cloth is not in a very dirty state:—Take two pounds of rice, boil it in two gallons of water till soft; put the whole into a tub; and when your liquor is at a hand heat, put in your chintz, and use the rice as you would soap. Then take the same quantity of rice and water, but when boiled, strain the rice from the water. Wash the chintz in this till it is quite clean: afterwards rinse it in the water in which the rice was boiled, smooth it out with the hands, and hang it up to dry: then rub it with a sleeking stone, or glaze it, and it is finished.

The method practised by dyers, is as follows:

Clean the chintz by washing it, or rather beating it with the doll in a tub of warm soap lather, at a hand heat; and, at last, either take flour of starch, and make it of the consistence of oil; the article is then beaten up in this; let it be opened well, that it may be smooth; dry in the air, and glaze it. Should the colour fade in the washing, (that is, the red and green,) it will be necessary to give the goods a drop or two of oil of vitriol in cold water after rinsing: this stays the colours.

FOR SCOURING THICK COTTON, AS COUNTERPANES, QUILTS, &c.

Cut a pound of mottled soap into thin slices; put it into a pan with a quarter of an ounce of potash, and one ounce of pearl-ash; then pour a pail of boiling water on it: let it stand till it is quite dissolved; then pour hot and cold water into your scouring tub, with a bowl of your solution of soap. Put in your counterpane, and beat it well out with a doll, often turning the counterpane over in the tub. When this is done, wring it across a gallows or a hook, which is done by turning the two opposite ends round each other, and putting a small clean stick between them. By this method you may wring it as dry as possible, the harder without juring it, the better. Having given it this liquor, you may put in some old cottons or woollen that the liquor may not be thrown away, and then

give your counterpane a second liquor as before. Wring it out again and rinse in clean cold water; then pour a sufficient quantity of boiling water into your tub, with a small quantity of the solution of soap, so that you will reduce it to a very thin lather. Put three tea spoonfuls of liquid blue into the tub, whence your goods were taken. and the acid of the liquid blue and the alkali of the pearl-ash and the soap ley will cause a slight fermentation or effervescence: stir this thin blue liquor with a stick, and put in your counterpane: beat it out with the doll about five minutes, which will colour the counterpane of a fine azure blue, of the lightest shade; but as it dries in the wind, the blue mostly goes off, and leaves a brilliant white.

N. B. In some cases where the cottons are very brown and bad, it is necessary, instead of the last of these three liquors being poured into the tub, that it should be thrown into the copper, and the cottons put in and boiled an hour. When taken out, return them into the tub with some cold water, and add the before mentioned quantity of chemic blue; and dry the articles in the air.

(Tucker's Family Dyer and Scourer.)

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER 15, 1826.

THE PRIZE RAM.—Our readers will remember, that at the last Maryland Cattle Show a spirited contest arose for the silver cup, which had been offered by the liberality of Mr. Rebello, Minister from Brazil, to the owner of the ram, which, being shorn upon the ground, should yield the *greatest weight of picklock wool*.

The prize was awarded, after close investigation, to W. R. Dickinson, Esq., of Steubenville, Ohio, although it was observed by the committee, that on Mr. Patterson's imported Saxony sheep, wool was to be found a shade finer: but the cup was judiciously offered for the animal which should bear upon his body the *greatest quantity* of the finest kind of wool; and it was, as Mr. Dickinson informs us, with an eye precisely directed to the *terms* of the offer, that he selected from his flock of native growth, originally from imported stock—not, the animal bearing the *finest* wool, but one which he was willing to show against the Union as carrying the *greatest weight of picklock wool*.

In the "Western Herald" we find the following letter from the Corresponding Secretary of the Maryland Agricultural Society, acquainting Mr. Dickinson with his success in which his answer, which came in the Editor's absence.

This fine ram was taken in possession on the 11th inst. and bore a considerable number of honours, grateful to the Editor's attention.

all yet much more gratifying to have seen you receive in person, the assurance of the respects of the Maryland Agricultural Society, accompanied with this offering by a distinguished foreigner, whose private virtues and intelligence correspond with his publick spirit.

Your premium sheep was quite sick this morning, but was relieved by the assiduous attentions of your judicious Agent,* and will, I trust, arrive safely to his native pastures.

The letter of Mr. Shepherd, the eminent woollen manufacturer at Northampton, published in No. 10, vol. 8, of the American Farmer, with the impartial report of a most judicious Committee, go to shew, that whilst we can have easy access to such flocks as yours, there is no further occasion to import fine woolled sheep from any quarter.

Yours, truly,

J. S. SKINNER.

To W. R. DICKINSON, Esq.

My Dear Sir, Steubenville, July 31, 1826.

I have been several weeks from home, and otherwise so much engaged, that I could not before acknowledge the receipt of your letter, announcing in such very flattering terms, the fact, that the Committee, at your late Cattle Show, had awarded to me the silver cup, placed by Jose Sylvester Rebello, Minister from Rio Janeiro, at the disposal of the Maryland Agricultural Society, and most judiciously offered by that enlightened Society "for the ram, which, being shorn upon the ground, yielded the greatest weight of picklock wool."

Considering the high (yet fair,) and fearful competition, as to its character; the degree of emulation previously excited; and that I was justly proud of a flock which, for the last fourteen years, I had been zealously rearing and improving—you can more readily imagine than I can express the gratification, which *such a victory* (over Saxon sheep of recent importation, selected with so much care and attention,) is calculated to afford.

I receive the assurance of the respects of the Maryland Agricultural Society with the deepest sense of gratitude, and shall treasure the cup, this offering of a distinguished foreigner, whose publick spirit will be long remembered in our country,) as a trophy of inestimable value; ranking its achievement among the most pleasing incidents of my life.

I am, most truly, yours,

W. R. DICKINSON.

J. S. SKINNER, Esq.

MARYLAND AGRICULTURAL SOCIETY.

The place for the next meeting of the Trustees of the Maryland Agricultural Society has been changed, by consent, and said meeting will be held at Brookland Wood, the residence of R. Caton, Esq. on Thursday, the 28th of this month.

* Alluding to Mr. Thomas Johnston, of Steubenville, who has the care of the ram

CONTENTS OF THIS NUMBER.

Essay on Reclaiming Marsh Land, by R. G. Johnson, concluded—Essay on Making Wine, by N. Herbemont—Science of Gardening, Causes of the Sap's ascent—On Raising and Making Wood for the Blue Vat, concluded—Report of the Central Committee on the Chesapeake and Ohio Canal—Management of Families, Cooking Utensils—Poetry, Address to Domestic Happiness by Cowper; To Young Wives—Advantages of Maryland as a place of Settlement for Emigrants—Horses—Cub Mare—Importation of Diseases of Dogs, Common Mange—Distemper—Recipes, To Clean Orange Colour on Silk, Cotton and Woollen, To Clean China—To Remove Fur from Sooty Counterpane—Queries—Editorial Notices—Advertisements—Faintly visible text at the bottom of the page.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	5	8	9	12
BEES-WAX, Am. yellow	—	30	31		50
COFFEE, Java,	—	16½	17	20	22
Havana,	—	15	16½		20
COTTON, Louisiana, &c.	—	11	13		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	14	16	18
Dipt,	—	11			14
CHEESE,	—	8½	10	12	15
FEATHERS, Live, . . .	—	30		37	
FISH, Herrings, Sus.	bbl.	2 3¼			
Shad, trimmed,	—	5 50	6 00		
FLAXSEED, Rough, . .	bush	75	80		
FLOUR, Superfine, city,	bbl.	4 50		5 25	6 00
Fine,	—	4 25			
Susquehanna, superfi.	—	4 00			
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	60			
white	—	65	66		
Wheat, Family Flour,	—	85	95		
do. Lawler, & Red, new	—	75	80		
do. Red, Susque. . .	—	80	83		
Rye,	—	55	60		
Barley,	—	80	1 00		
Clover Seed, Red . .	bush	4 50		5 00	
Ruta Baga Seed, . .	lb.	1		2 50	scarce
Orchard Grass Seed,	bush	2 00		1 50	
Mangel Wurtzel Seed,	—	1 25		3 50	
Timothy Seed, . . .	—	3 00			
Oats,	—	31	35		
Beans, White, . . .	—	1 70		1 87	
HEMP, Russia, clean, .	ton	215			
Do. Country	—	120	130		
HOPS, 1st sort, . . .	lb.	12		25	
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	7			
Bar	—	7½	8		
LEATHER, Seal, best,	—	22	23	32	
MOLASSES, sugar-house	gal.	46	50	62½	75
Havana, 1st qual. . .	—	30	33	37½	
NAILS, 6x20d.	lb.	6½		9	
NAVAL STORES, Tar,	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27		40	
Spermaceti, winter .	—	70	75	88	
PORK, Baltimore Mess,	bbl.	11 00	11 50		
do. Prime,	—	8 50			
PLASTER, cargo price,	ton.	4 00			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5½	7½	10	12
WHISKEY, 1st proof, .	gal.	32	33	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	33		50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do.	—	8 50	9 25		
Louisa	—	7 75	9 75	10	11
Loa	lb.	9	22	20	
SPICES	—	0		1 00	
Ginger,	—	7	12	12	
Peppe	—	21		25	
SALT, S	bush	3		75	
Liverpool,	—	3	47	75	
SHOT, Balt. pl . . .	clb.	—		12	
WINES, Madeira, . .	gal.	—	5 00	5 50	
do.	—	—	—	1 50	
Lisbon	—	—	—	1 50	
Clare	dc	—	—	20	
Port, fine	ea	—	—	—	
Port, Madeira . . .	—	0	—	—	
do.	—	3	2	—	
do.	—	—	—	—	

Printed every Friday, at \$5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOR, corner of 8th and Market streets, where ever description of

AGRICULTURE.

ART OF BREEDING.

Mr. Powell's queries answered by Mr. John Barney, of Delaware, ON BREEDING CLOSELY IN—ON MIXING DISTINCT RACES—ON the combination of SEVERAL VARIETIES IN ONE BREED.

Do you ever put *brother and sister* together, in breeding Sheep, except for particular purposes?

Answer. If I could conveniently avoid it, I would NEVER DO IT.

Did you buy of Farmer part of your flock?

Answer. I did, one of his Bakewell rams, about 14 years ago.

Did you buy of Case, another part?

Answer. I did, about 13 years ago, a few of his ewes and lambs.

Did you buy of Exton, another part?

Answer. I did, 5 ewes in the same season.

Did you not buy some of James & Hickman's *IRISH SHEEP?

Answer. I did, a few ewes about 15 years since.

HAVE NOT ALL THESE PORTIONS OF YOUR FLOCKS BEEN MIXED?

Answer. Yes.

Do you approve of MIXING DISTINCT RACES, except where animals of the same race cannot be had?

Answer. No.

CANNOT SEVERAL VARIETIES BE COMBINED IN ONE BREED?

Answer. Yes.

To the foregoing questions submitted by Mr. Powell, I have given the above answers.

JOHN BARNEY.

Philadelphia, Sept. 13, 1826.

If a man select his flock from four folds, and allow not brother and sister to be joined, except where it cannot be conveniently avoided—

Quere. How long may he not breed from such a flock without breeding closely in and in.

MR. CHURCHMAN,

Dear Sir,—Does your large experience in the management of sheep and cattle, confirm the answers given by Mr. Barney to my inquiries upon breeding?

Answer. My experience does confirm them.

C. CHURCHMAN.

September 13, 1826.

Mr. Churchman is an extensive Grazer and Breeder of Sheep, and successful in his practice in the management of a flock containing a thousand ewes. See his communication, *Memoirs Pennsylvania Agricultural Society*, page 102.

(Sinclair's Code of Agriculture, page 104.)

"On the Principles of Improved Breeding.

"The art of breeding consists, in making a careful selection of males and females, for the purpose of producing a stock, with fewer defects, and with greater properties than their parents; by which their mutual perfections shall be preserved, and their mutual faults corrected.†

*This breed of Sheep were imported by Jeffrys. Mem. Pennsylv. Agric. Soc'y. page 107.

†Sir John S. Sebright's Essay on the Art of Improving the Breed of Domestic Animals, p. 5 and 8. All breeding proceeds on the presumption, that the tendency of any individual animal is, to transmit to its offspring, the form, constitution, and qualities which it possesses; and as two animals are concerned in the production of one offspring, that one is expected to inherit, a form and constitution, compounded on the joint qualities of its two parents. Thus it is found, in numerous breeds of animals, as in deer, in the West Highland cattle, in the North Devon. and in the wild cattle of Chillingham Park: the offspring, for an indefinite number of genera-

"The objects of improved breeding, therefore, are, to obviate defects, and to acquire and to perpetuate desirable properties; hence, when a race of animals have possessed, in a great degree, through several generations, the properties which it is our object to obtain, and any tendency to produce unwished for properties, has been extirpated, their progeny are said to be *well-bred*, and their stock may be relied on.*

"It was upon this principle of selection, that Bakewell formed his celebrated stock of sheep, having spared no pains or expense, in obtaining the choicest individuals, from all the best kinds of long or combing woolled sheep, wherever they were to be met with;† and it cannot be doubted, that any breed may be improved in the same manner, namely, that of putting the best males to the finest females. After a superior breed, however, has thus been obtained, it is a point that has been much disputed, whether it is proper to raise stock, 1. From the same family; or, 2. From the same race, but of different families; or, 3. From races entirely different.

"1. *Breeding from the same family.*—This method is called breeding *in-and-in*, or putting animals of the nearest relationship together.‡ Though this plan was for some time in fashion, under the sanction of Bakewell's authority, yet experience has now proved that it cannot be successfully persevered in. It may prove beneficial indeed, if not carried too far, in fixing any variety that may be thought valuable,§ but on the whole, it is so only in appearance. Under this system, the young animal comes into the world, on, comparatively, a very small scale. By keeping it fat from the first moment of its existence, it is made to attain a greater size than nature intended; and its weight in consequence will be very great in proportion to the size of its bones. Thus a generation or two of animals of an extraordinary form, and saleable at enormous prices, may be obtained; but that does not prove that the practice is eligible, if long persisted in.¶ On the contrary, if the system be followed up, the stock get tender and delicate, they become bad feeders; and though they retain their shape and beauty, they will decrease in vigour and activity, will become lean and dwarfish, and ultimately incapable of continuing the race. The instances of this are numerous. The celebrated breeder, Prinsep, found, that decrease of size unavoidable, in spite of all his endeavours, by keeping his young stock well, to prevent it.¶ Sir John S. Sebright tried many experiments by breeding *in-and-in*, with dogs, fowls, and pigeons, and found the breeds uniformly degenerate.¶ A gentleman who tried the system with pigs, brought them at last into such a state, that the females gave over breeding almost entirely, and when they did breed, their produce was so small and delicate, that they died

tions, have borne the same general characters.—*Observations by C. Mason, Esq., of Clifton, co. Durham.*

*Sir John S. Sebright's Essay, p. 7. Incessant care and attention, however, are necessary, to keep them up to the mark; and this is rather fortunate than otherwise, since it perpetuates the merit of breeders, and the competition of stock.

†Young's Lecture, p. 9.

‡It having been found, that this system produced animals quite deficient in vigour, those who are now possessed of a capital stock, keep two or three *streams* of blood, quite distinct, that they may avoid a consanguinity.

§Sir John S. Sebright's Essay, p. 13. Paper by Henry Cline, Esq., Comm. vol. iv. p. 442.

¶Paper by T. A. Knight, Esq., Comm. to the Board of Agriculture, vol. ii. p. 185. These dwarfish males, however, may not have an injurious effect on the stock of another person, especially the first cross, if the females be of a coarser quality, and, on Mr. Cline's principle, if they are of a larger size than the males put to them.

¶Paper by T. A. Knight, Esq., Comm. to the Board of Agriculture, vol. ii. p. 185.

**Sir John S. Sebright's Essay, p. 13.

as soon as they were born. Nay, Mr. Knight's experiments with plants have fully convinced him, that in the vegetable, as well as in the animal kingdom, the offspring of a male and female, not related, will possess more strength and vigour, than where they are both of the same family.* This proves how unprofitable such connections are. That is no reason, however, why a breeder may not manage a particular family of animals to great advantage, by shifting or changing, instead of breeding directly from parents to offspring.† Hence the propriety of procuring males, from the flocks and herds of those who have the same, or a similar breed. It has been remarked, that those farmers have in general the worst flocks, who breed from rams produced on their own farms, and that an interchange of males, is mutually beneficial.‡

"With respect to the doctrine, 'that when you can no longer find better males than your own, then by all means breed from them, for that best can only beget best,' it is ably refuted by an intelligent author, who has devoted much attention to the art of breeding. He observes, that there never did exist an animal without some defect in constitution, in form, or in some other essential quality; and such defect, however small it may be at first, will increase in every succeeding generation, and at last predominate in such a degree, as to render the breed of very little value.§ Breeding *in-and-in*, therefore, would only tend to increase, and to perpetuate that defect, which might be eradicated, by a judicious selection, from a different family, in the same race.

"2. The breeding from different families of the same race, is therefore a preferable system. When these have been for some time established in different situations, and have had some slight shades of difference impressed upon them, by the influence of different climates, soils, and treatment, it is found advantageous, to interchange the males, for the purpose of strengthening the excellencies and remedying the defects of each family. On this principle, the celebrated Culley continued, for many years, to hire his rams from Bakewell, at the very time, that other breeders were paying him a liberal price for the use of his own; and the very same practice is followed by the most skilful breeders at present.¶

"3. Any attempt at improvement, by *crossing* two distinct breeds or races, one of which possesses the properties which it is wished to obtain, or is free from the defects which it is desirable to remove, requires a degree of judgment and perseverance, to render such a plan successful, as is very rarely to be met with. Indeed, though such crosses may, by great attention, answer at first, yet it is generally found, that great singularities attend such mixtures: and, in breeding bulls, though some of them may apparently do, yet their breed is not to be trusted. The first cross between a good short-horned bull and a good Kyloe cow, will make a good grazing animal; but by proceeding farther, disappointment will ensue, if a regular stock be wanted. If such a cross is to be persevered in, the male should always be of the same breed with the first.¶¶

Mr. Editor,—I have always considered Mr. Bar-

*Paper by T. A. Knight, Esq., Comm. to the Board of Agriculture, vol. ii. p. 186.

†Husbandry of Scotland, vol. ii. Appendix, p. 109. The same rule holds good regarding the human species. By a train of unfortunate circumstances, a brother and sister German, ignorant of their close connexion together, were married. They had ten children, all of whom died before their parents.

‡Paper by T. A. Knight, Esq., Comm. vol. ii. p. 172.

§Sir John S. Sebright on Improving the Breeds of Domestic Animals, p. 11 and 14.

¶General Report of Scotland, vol. iii. p. 17.

¶Husbandry of Scotland, vol. ii. Appendix, p. 109.

ney's Sheep extremely fine of the kind and to them I referred when I stated (Memoirs Pennsylv. Agric. Soc'y page 111.) "A successful grazer of Delaware has shewn his sagacity by crossing with Jeffry's, and other sheep; he has gained size and weight of fleece." And I may add that the finest Bakewell sheep (as it is called,) of *Beanes' importation*, which I have possessed is derived from Mr. Barney's flock.

Your obedient servant.

JOHN HARE POWELL.

Powellton, Sept. 13, 1826.

ON YOLK, AS AN INDICATION OF THE FINENESS OF WOOL.

It has so happened that for some months I have not had an opportunity of reading the American Farmer, and had therefore not seen what had been published there in opposition to the few remarks which I had taken occasion to suggest on the selection of Merino sheep, as the result of my own observation, and confirmed by that of every skilful breeder of that stock with whom I have conversed on the subject, for several years. It is of no small importance for those who are engaged in improving fine woolled sheep to be able to judge accurately of the essential quality of their stock, and perceiving a once prevailing, but now exploded error, repeated in a number of your paper by one of your correspondents, it seemed to be due to the interests to which your very useful and ably conducted paper is devoted, to suggest a correction. The opinion excepted to in my former remarks, is "that the greatest quantity of yolk indicates the finest wool;" to which I added "that the pendant dewlap and woolly heads and legs, though also once esteemed characteristic marks of fine wool, were not to be relied on in the selection of a flock," and that an "excessive secretion of yolk was rather injurious than otherwise to fine wool." Opposite opinions have been urged upon the authority of respectable persons in this country and agricultural writers of some eminence in England. I therefore propose to re-examine the points in controversy, in the hope of eliciting truth, believing that it is a most important matter in agriculture to have any one fact in relation to it settled.

The reader will observe, that in the selection of a Merino flock, the peculiarities of Merinos are to be considered, not in comparison with other breeds, but in comparison with each other; not as a species, but as individuals of a species. I shall not, therefore, contend that Merinos have less yolk, or less wool on their heads and legs, than other breeds; such an assertion would be absurd: but I contend that the excessive secretions of yolk and the excessive covering of wool on the heads and legs of individual Merinos, is no evidence that such sheep have finer wool than those of the same race which are not so marked. In performing this task, little more will be necessary than to examine the authorities upon which the opposite opinion is founded. The first that presents is Dr. Parry, well known in the agricultural world as a breeder of some note in England. He had procured a few full blood Merinos from the King's flock, and was engaged in crossing them with the finest woolled races he could obtain. When he wrote his paper to the Board of Agriculture, he had comparatively but little experience, and he evidently spoke of Merinos as a race in distinction from other breeds, when he said they were "buried in wool to their eyes, with their legs enveloped down to their very hoofs." He does not say these marks indicate the finest woolled Merinos. If he had waited a few years longer before he wrote that paper, he would have said, with Mr. Tessier, that "the young ones have it to the extremity of the feet," and that a considerable part of this relic covering on the face and legs, disappears

before the sheep are five years old. When Merinos were first introduced into England and in this country, there was a prevailing opinion that all those characteristics which most distinguished them from other sheep, were the evidences of superiority in relation to each other. These opinions found their way into essays and agricultural reports, and were received as orthodox by all those who read them, until proved, by observation and experience, to be fallacious. It may be remarked, that few persons give sufficient attention to the subject ever to become nice discriminating judges of fine wool; as our skill in this respect improves, our impressions and prejudices derived from authority are found to yield: but the subject has become by that time a stale one, and the *cacoethes scribendi* has so abated, that few ever think it worth the trouble to refute errors even of high authority, when public opinion is so nearly corrected.

It was said by intelligent writers in England, before and after the introduction of Merinos into that country, that their wool would degenerate in any climate colder than that of Spain, and that their mutton was not fit to eat. Every body believed it, and the manufacturer would not buy the wool from the King's flock after inspecting it: they would not trust the evidence of their own senses, (see the report of Sir J. Banks, in 1800.) These sheep were imported in 1792; in 1796, a forced sale of the wool was made, and for several years it sold below the imported Spanish wools. In 1801, some carcasses were given away, and one butcher was induced to buy a few more. At length, says Sir Joseph, "experience has demonstrated, both at *Wind sor* and *Waybridge*, that Spanish mutton is of the best quality for a gentleman's table." If prejudices such as these were so difficult to combat among a mutton eating and wool manufacturing people, how much more likely would the crude and erroneous notions of the most unprejudiced men of that day become the confirmed opinion of their contemporaries, and be adhered to as prejudices by their successors? An abundance of yolk was found in Merino fleeces, and Merino fleeces were finer than any others; therefore, an exuberant secretion of yolk is essential to the growth of fine wool, to the preservation and support of it, *is the very pabulum of wool*. Such is the syllogism upon which the opinions I am combatting are founded. Luccock is the chief authority relied on to support them. The writers before him seem to have embraced the notion upon the syllogistic foundation above stated, and mostly dismissed the subject with a passing remark. He probably adopted it in the same way, but it comported better with the plan of his work to give an elaborate speculation on the subject, to which I beg the reader's attention. It may be observed, that he was a wool stapler, not a breeder of sheep nor a manufacturer. It is well known that the Spanish wool stapled in England was formerly, and I believe is yet, all washed in Spain; it is roughly assorted in the fleece before washing; but the English stapler does not handle it in the yolk. Luccock had therefore, probably, but little knowledge of Merino wool in the yolk; as indeed the bare passing it through his hands could not enable any one to determine the properties of yolk. He candidly admits that the investigation of the subject "was more properly the business of the grazer than the wool stapler as he had the most abundant means of acquiring information;" and adds, that "the few facts with which we are furnished, indicate that without the assistance of yolk or the application of some other substance as a substitute for it, wool possessing the best qualities cannot be produced." Now, let us see what the facts alluded to are, and what is the substitute to be employed. "In the southern parts of the Island," says L., "the yolk is sufficient for the production of a coat which enables the flock to endure the rigours of winter and to

prevent the fleece from becoming thin and hairy," but "in the northern parts, and on the hills of Scotland, some of the breeds produce it in such small quantities as to render it unsafe for the farmer to expose his flock to the severities of winter, unless he furnish them with an artificial covering of grease and tar in order to keep them warm." Such is the foundation of a grave theory upon an abstruse operation in the general economy of nature! "In warm climates," says he, "nature provides this nourishing *saponaceous pabulum*" in sufficient quantity to keep the sheep warm and prevent the growth of hair, but in the hills of Scotland, nature neglects her duty, and the profound chemico-physiologists of that enlightened region have discovered that grease and tar are an excellent substitute for soap and potash, (the component parts of yolk.) Remarkable similitude, and admirable discovery! By parity of reasoning, we may expect, in due time to find, that the natural covering on sailors' legs, instead of being thin and hairy, will be converted into "a soft and attenuated pile" of fine wool, sufficient to keep them warm without the covering of the greasy, tarry trowsers which now so encumber those noble fellows! In a subsequent part of his book, Mr. L. observes, "that wool is injured by the readiness with which water mingles with and carries off that animal soap," (yolk,) and grease and tar are necessary to preserve the yolk and repel the water. Thus in order to maintain an absurd theory, the whole economy of nature is arraigned by Mr. L., and an artificial system introduced. Grease and tar are first made a substitute for yolk, which preserves warmth and destroys hair, &c.; then yolk is found to possess too great an affinity for water, by which the wool is injured without the aid of a repellant, which is readily found in the substitute, viz: grease and tar!

Now, let us see what later writers have said on the subject of the grease and tar application. Sir George M'Kenzie, in his treatise on sheep, says, "Shepherds vary in their answers, when asked why they smear their sheep. Some say it is intended to prevent the scab; some to cure it; others say it is for the purpose of keeping off rain, and some assert that they do it merely to soften the wool; but it cannot be denied they bedaub their sheep with tar in order to make the fleeces weigh well; in other words, to cheat the wool merchant." He seems to admit that a proper composition may be of some use, but adds, that "it can have very little effect on coarse fleeces," and that for the finest wool, which is supplied with an oily matter, it is unnecessary. Sir Joseph Banks, who had the care of the King's Merino flock, says "that smearing is required in proportion to the coarseness of the fleeces," and condemns the use of it for fine woolled sheep. The probability is, that both writers had no confidence in the practice; and that it is useless for any other purpose than to repel the rain from sheep kept in a cold, wet climate, whose fleeces are too thin to keep them warm. The idea that grease and tar are a substitute for yolk, which is soap and potash, is absurd. The English writers seem to have been pleased with the notion of having found in the Merino a substitute which supplied the place of the obnoxious practice of smearing, and they seized the occasion to get rid of the prejudice. Vauquelin, a very respectable French chemist, who is referred to by all subsequent writers as the discoverer of the properties of yolk, remarked, "that wool which had remained a long time in its own yolk, swelled up, split and lost its strength; effects which took place in strong, soapy water." "May it not be possible," says he, "that this accident often takes place on the backs of the animals, especially during damp warm weather. The acidity of yolk may occasion an irritation in their skin and prove the cause of some of those maladies to which that organ is subject in damp, warm weather; fortunately at this season they are occasionally exposed

ed to rains which wash them and carry off at least a part of this matter."

The scabby condition of nearly all the Merino flocks imported into the United States, and their liability to that disease, when kept in close folds, are facts strongly corroborative of Mr. Vauquelin's theory.

But to return to Mr. Luccock who is the chief authority for the opinion of "Curwen" on yolk,—let us hear what he says of his own experience in Merino sheep, the only race in which an exuberance of yolk is found. Page 85. "*I have not seen,*" says he, "*any of these animals or their produce which are said to afford a staple equally fine from every part of their body; but conjecture that if this breed were minutely examined it would appear that the yolk is produced in equal quantities in every part of the carcass.*" Thus it appears that Mr. Luccock *had never seen a Merino, not even a mixed blood of that race.* Can it be necessary to combat his theory of yolk any further? If it were we have his own admissions after all the crude speculation he has given, that "the copious and regular perspiration of the animal, though undoubtedly favourable to the production of good qualities in wool, is not absolutely essential to the fineness of the pile." The reader must now be satisfied that Mr. L. was a speculative writer, wholly destitute of any claim to be regarded as authority on this point. I shall, therefore, dismiss him and suggest a few remarks for the consideration of those who have placed too much confidence in him. It may be considered as a received opinion that high keeping renders wool rather coarser than low keeping. The breeders of Merinos have been for some time reluctantly yielding to it—the authority of Mr. Sheppard, and many others, for this fact is almost irresistible. Now, it is well known that the same sheep when fat, secretes more yolk than when lean; it is also, well known that rams secrete more yolk than ewes, while the latter have the finest wool. These facts are incontrovertible, and are wholly irreconcilable with the theory, that the most yolk indicates the finest fleece.

In one of the essays published in the American Farmer, a Mr. Bullock certifies that "Southdown pick lock is preferable to Merino pick lock of this country." If this be true, how does it happen that the Southdowns can produce such fine wool without secreting more yolk than the common sheep of this country—if yolk be the "pabulum of wool," its essential support, one would suppose it as important to that end in one race as in another: all who have seen badly selected Merino flocks, imported or native, must know that there are often to be found among them, individuals actually inferior in fineness of pile to the ordinary half bloods, while they abound in yolk to a much greater extent. In addition to these facts, it is known that wool sheared without washing, and put away in the yolk, takes injury which it will not do if well washed on the back, in which state the manufacturers greatly prefer it. I shall only observe further that I have been in the habit of examining wool and Merino sheep with very minute attention for fifteen years, and from my own experience, and that of every other practical breeder whom I have met with for several years, I cannot be mistaken in the conviction that the quantity of yolk in a Merino is no indication of the quality of the wool, and that a very copious secretion of it is very detrimental to the wool.—it causes dirt to adhere, and keeps it wet after rains so long as to spoil the tenacity of the filament, as any one can ascertain who will compare the strength of the outer ends of a very dirty fleece with those of one which has little yolk in it. I was present at a sale of Saxon Merinos in New York in June last, there was a very large collection of Merino breeders from the states of New York, Connecticut, Vermont and Massachusetts; also several from states further south:—probably more practical skill, on Merino breeding, than has ever been at one place in our country. I was de-

sirous to ascertain their opinion on the effect of high keeping, and found, as far my inquiries extended, that they were unanimous in a settled conviction, that moderate keeping produced the finest wool; I also inquired whether they regarded a very copious secretion of yolk as a characteristic of fine wool. The countenance of every person to whom I put the question indicated surprise that such an inquiry should be made, the general reply was, I pay no regard to any marks but the quality of the wool on every part of the carcass; some added, that so far from regarding the yolk as a favourable mark, they would always prefer *cateris paribus*, the sheep which had the least of it. The fact that yolk is no indication of the degree of excellence in Merino wool is so obvious, and can be proved by an examination of any flocks in the United States so easily, that I would as soon think of looking into my almanack to ascertain the state of the weather while I am writing, as to refer to the authority of any writer who speaks without experience on such a point. I hope you will excuse this long paper from the same motive which produced it.

Yours, &c. COLUMELLA.

THE ACCOMAC, OR MAGOTHY BAY BEAN.

J. S. SKINNER, Esq.

September 15, 1826.

Sir.—Some time ago I owned a poor sandy field, which repeated green dressings with buckwheat could not fertilize. Having read what is extracted below from Bordley's Essay on Husbandry,* I endeavoured to procure the Accomac Bean-seeds, but did not succeed, till just now, when I received some from an acquaintance, who was on a visit in Accomac. Owning no field now, I take the liberty of sending the seeds to you, supposing, that in the hands of some one of your friends they may be of use.

HORTICULTURE.

HINTS ON THE MANUFACTURE OF CURRANT WINE.

TO THE EDITOR OF THE AMERICAN FARMER:

Respected Friend,—The accompanying sample of wine was made in the summer of 1824, at my currant orchard, (Germantown, Pennsylvania,) from the common red currant,† in the following manner.

* The Accomac, or Magothy Bay Bean (*Cassia chamaecrista*, of Linnæus,) has wonders imputed to it as an ameliorator of the light sandy lands in the peninsula of Virginia. In size, and other particulars, the plant may be considered as being a Lilliputian locust tree; for although it is an annual, yet its stem is a hard locust-like wood, and its leaves, flowers, pods and seeds, greatly resemble those of that tree. The woody hardness of the plant is in appearance against its being a choice ameliorator, as it is not likely to ferment, and, as it were, melt away in the ground, so soon as buckwheat and other juicy, soft substances. No plant, however, can exceed the shade it gave on a piece of ground in my garden. A Lilliputian might have been there lost in darkness. This shade and a perspiration from the plants, during the greatest heat of summer, together with an extraordinary quantity of blossoms, pods, and leaves, which the plants deposit on the ground, are probably what give the great manuring and amelioration, which the people of Accomac satisfactorily experience. But this plant, which is not the Partridge Pea, is so difficult to eradicate, it is said, that it might become an injurious weed in other soils and courses of crops than those in Accomac. Their courses being maize, oats, and lay, on a sandy, loose soil.

[Bordley's Essays and Notes on Husbandry, 2d edit., Phila., 1801, p. 46, note.]

[† Offerings of this sort are reserved for suitable occasions, when they may be submitted to the taste and judgment of select parties. This bottle of patriotic

The juice expressed from 100 lbs. of fruit, was put into a thirty gallon cask, to which I added seventy-two pounds of brown Havana sugar, of a handsome quality, and then filled the cask nearly full with water. I placed it immediately *above ground*, in a frame building, where it was exposed to the greatest heat of the summer. It has never been in the cellar, nor has it had *any distilled spirits* added to it. My experience has taught me several facts, which I deem important in the manufacture of currant wine. In the first place, I think I have proved the *dry box* sugar to be much preferable to the common Muscovadoes, both on account of its greater strength, and its not *communicating any foreign or molasses flavour* to the wine. And in the second: The great objection which stands against the domestic wines of this country is, that a considerable portion of the saccharine matter remains suspended in its natural form. By keeping the wine in a warm situation, the fermentation goes forward more actively and perfectly, and approaching a state of *dryness*, produces, (simply by the process of vinous fermentation,) such a quantum of spirit, as makes it entirely unnecessary to add any artificially prepared.

I have been for several years engaged in making currant and cherry wine, and have now near 3000 currant trees growing. I am also establishing a vineyard of three acres, from which I shall expect some grapes next season. I have been peculiarly cautious in the selection of such kinds, both for the table and wine, as appear to be fitted to the climate, &c., and have every confidence in its proving a profitable investment of money and labour.

EDWARD H. BONSTALL.

Baltimore, 9th mo., 15, 1826.

ON GARDENING.

(From the Works of the Prince de Ligne.)

"I should wish to inspire all the world with my taste for gardens. It seems to me impossible that a bad man should possess it: he, indeed, is incapable of any taste: but if I, for that reason, esteem the searcher of wild plants; the active conqueror of butterflies; the minute examiner of shells; the sombre lover of minerals; the frozen geometrician; the three lunatics of poetry and painting; the absent author; the abstract thinker; and the discreet chymist,—there is no virtue which I do not attribute to him who loves to talk of gardens, and to form them. Absorbed in this passion, which is the only one that increases with age, he daily overcomes those which derange the calmness of the soul or the order of society. When he has passed the drawbridge of the city gate, the asylum of moral and physical corruption, to go and work in his lands, or enjoy them, his heart rejoices at the sight of nature, and experiences the same sensation as his lungs, on receiving the pure air that refreshes them."

and brandy-less wine will be drunk at the next meeting of the Trustees of the Maryland Agricultural Society. By the bye, it has pleased us to perceive, on the part of a gentleman, hitherto incorrigibly sceptical as to home-made wine of every kind, some symptoms of "veering about." In the increasing dryness of our summers he begins to perceive a better adaption of the climate to the culture of the grape; but having himself, perhaps, the best cellar of imported wines in the state, it was not to be wondered at that he should be slow to encourage the hebetating, unskillfully compounded drink, which is sometimes introduced under venerable names. From a gentleman at Brighton, in Massachusetts, we received, not long since, a few bottles of very superior home-made wine; amongst them some called Brighton Champagne, approaching so nearly to the best imported, as to require a very delicate taste to distinguish it. We shall quarrel with no one who sends to be t such samples of taste.]

INTERNAL IMPROVEMENT.

CHESAPEAKE AND OHIO CANAL.

(Concluded from page 204.)

[Upon these estimates the National Intelligencer makes the following observations:]

It was publicly stated on the floor of Congress, during the last winter, that the portion of the Chesapeake and Ohio Canal, between Cumberland and tide water, being in length one hundred and eighty-four miles, with a lockage of 578 feet, and having a breadth of 50 and depth of 5 feet, would cost upwards of 8,000,000 of dollars. In this estimate, it is understood that portions of the labour and materials, were computed at the following prices:

In Masonry and Stone Work, for dry walls, where stone is on the spot, \$3 00 the perch.
For walls constructed with mortar, per the cubic yard \$5 81 cents, equivalent to, 5 37½
For bricks per thousand, 8 00
Lime in all its uses, at 50 the bushel.
And day labour, per day, at 1 00
Lockage, per foot lift, at 1500 00

These estimates may be reduced, it is believed, on the most expensive part of the route of the canal, after the first ten or twenty miles, as follows:

For dry walls, \$1 50 the perch.
For walls constructed with mortar, 2 00
For bricks, per thousand, 4 00
For lime, per bushel, 25
For labour, by the month, at the rate per day, of 50

It is well known, that, after reaching the Blue Ridge, these prices may be yet further reduced:

The rubbing of the external surface of the Canal Banks, to prevent abrasure, by river freshes through-out, to \$1 00 the perch.
Excellent stone laid in mortar, 1 75 do
Bricks, per thousand, near the tunnels, where alone they will be required, 3 50 pr thousand
Lime, per bushel, in stone, one of which will make near two of alaked lime, to 16 2-3
Labour, as before, &c. 50 the day.

From beyond the Allegany, the Delegates from Pittsburg supply the following facts, as the basis of a yet lower estimate, being that derived from the actual contracts for constructing 25 miles of the new Pennsylvania Canal, extending up from Pittsburg, along the Allegany river.

Abstract from the contracts entered into on the Western Section of the Pennsylvania Canal.

No. Section.	Chains.	Excavation cubic yard.	Average cutting.	Embankment per cubic yard.	Rock Excavation per cubic yard.
1,	21	7½ c.	7 ft.	6½ c.	33 c.
10,	21	10		6½ c.	25 c.
14,	18	7½	15 ft.	9 c.	35
29,	21	5.9		9.9	37½
51,	21	5.8		6	
69,	21	7½		12	49

Locks, per perch, less than \$4, including all expense, or \$3990 for a lock of ten feet lift, say \$400 a foot lift, including all expense, fit for boats to pass through. The locks are ranged and hammered stone.

Stone work, per perch, on culverts, &c. from \$1.49 to \$1.99.

Small aqueducts across the creeks, \$7 per foot run. We also state that common day labourers are hired at \$15 per month, including boarding, &c. This is the highest rate.

Lime, 10 cents per bushel, (stone.)

Best brick \$3½ per thousand.

JAMES S. CRAFT,
HARMAR DENNY.

The result of all these facts is simply this, that 25 miles of Canal, with its lockage included, have been bona fide, put under contract, with skilful and responsible contractors, for less than 9000 dollars the mile. The breadth and depth of the Canal being the same with the dimensions of the canals of New-York.

On the subject of coal, the gentlemen from whom a part of the above facts are derived, furnish the following gratifying particulars: That coal is now supplied from Pittsburg by water carriage, to Louisville, at the distance of 550 miles, in arks that never return, at from 6 to 8 cents the heaped bushel.

That, in Pittsburg, it is conveyed from the coal excavations to the dwelling houses and factories in town, a distance of from one and a half to five miles, at 3 cents the like bushel. And, the following analysis of this price, shews that it is not founded on transient circumstances.

The day labour of the band, who excavates the coal, and brings it to the mouth of the cavern, supplies one hundred bushels, which, at 1 cent the bushel, allows for his labour a subsistence, and the rent of the mine one dollar the hundred bushels.

A wagon, with five horses and a driver, makes four trips a day, over a distance, by a turnpike, of one and a half miles, bringing, at each trip, 70 bushels, and in the day, 280 bushels, which at 3 cents per bushel, allows four dollars for the use of the wagon and team, and leaving, for more distant supplies or for profit on these, from the nearest caverns one hundred and sixty cents per day, to the capitalists engaged in this business.

It is known that the Chesapeake and Ohio Canal will, in any of the contemplated routes, across the mountains, reach, in the first two hundred miles, and pass through inexhaustible beds of excellent coal, which may be loaded in a boat at a cent and a quarter the bushel, transported to Washington with profit, by the canal, for four cents more, and paying a toll of six and a quarter cents, leave one and a quarter cents a bushel, for the rent of the mine; and yet, be sold in the Washington market at twelve and a half cents the bushel, and in that of Baltimore, Philadelphia, or New-York, at 30 per cent. less than any coal now supplied to these markets. Messrs. Denny and Craft state, that seventeen bushels of heaped coal are computed at Pittsburg, to furnish as much heat as one cord of the best hickory wood; and sixty bushels, which cost, delivered at the factory, one dollar and eighty cents, give motion, for twelve effectual and thirteen and a quarter actual hours, to three thousand cotton spindles, while the factory is, at the same time, and by the same fuel, warmed throughout.

It is left to arithmetical calculation, guided by a knowledge of the arts and of the uses of such fuel, so cheaply provided, to estimate its consumption, and the profit which its supply must yield, upon the canal, the cost of which, it is now confidently believed, between the excavations in the mountains that furnish the coal, and of which they are in a great measure composed, and the tide water of the Potomac, will not exceed four millions of dollars.

Six and a quarter cents toll are charged upon the bushel of coal; not because in any tariff this would bear a fair proportion to its price, but because the commodity will bear the toll. When the other uses of the canal shall admit of it, this toll may be reduced to two cents the bushel, and coal supplied to the District on cheaper terms than it is now furnished from Pittsburg to Louisville, viz: at six and a quarter cents the bushel—one fourth of a cent being the reduced rent of the Canal Bank.

Allowing 150 bushels for every family, and confining the consumption of coal to the inhabitants, whom it would reach, on the waters of the Potomac and the Chesapeake, alone, it cannot be questioned, but that at six and a quarter cents the bushel, it would pay an income of six per cent. on the

cost of that part of the canal which conveyed it to the consumer.

LADIES' DEPARTMENT.

FOR THE AMERICAN FARMER.

"Falstaff. Boy,—

Page. Sir?

Falstaff. What money have I in my purse?

Page. Seven groats and two-pence.

Falstaff. I can get no remedy against this consumption of the purse. Borrowing only lingers and lingers it out, but the disease is incurable."

Unfortunate Sir John! so fond of good living with means so slender!—I condole, I sympathise with thee, merry knight, being in the same predicament myself.

It may be useful to some of your readers, Mr. Editor, to know by what process my purse, once distended by gold and silver has been thus sweated down—how it contracted this incurable consumption. I commenced the world with some advantages: such as family, reputation, property.—Finding the world combined against bachelors, partly to please it, partly to please myself, I got married; and although I did not find matrimony "such great things as it had been cracked up for," I was pretty well satisfied, until I found my expenses increased in an alarming degree. "My dear" soon discovered that we wanted a vehicle to ride in. I reminded her of our "chaise and one," the good old style of our country; but she preferred a "coach and pair." I objected to the cost—that I could not spare the money.—She replied that neighbour Dash, no richer or better than myself, had a "double carriage." I tried to convince her that this would bring on "double trouble," as well as double expense. "We can drive the chaise ourselves—the chaise costs only one half as much as the coach, and, besides, we have the chaise already—one horse costs and consumes but one half as much as two—and, again, we already have "Dumpling," for whom I have no match, and, therefore, should have to buy a pair, which, you know, are not worth any thing unless they are exactly alike. The coach must have a coachman, and, in this country of gates, a foot man, and I have not them to spare." "But, my dear," said she, "you are of a good family, as well as myself,—every genteel family has a coach—and, you know, I cannot drive." I urged the example of neighbour Thrift's wife, who could drive, ride on horseback or walk, as might be most convenient; but she remarked that "Mrs. Thrift did not come of a good family, and that this, in her, was all natural enough. How should I look were I to meet Mrs. ——— rolling in a coach, and I driving Dumpling?" I replied that Mr. ——— had died a bankrupt, in consequence, as it was thought, of her extravagance, and that the coach she now used was borrowed.

The contest was often renewed; at length, whether from the flattery contained in her argument, or the sake of a quiet house, the coach was bought; and from that moment I date the commencement of my ruin;—not exactly from the cost, but from the style of living it introduced.

The importance of a family, in the country, is wonderfully increased, in their own conceit, by a "double carriage,"—not a negro on the farm but feels it, and becomes more proud and worthless.—For a long time little was thought of, by my wife and servants, but sporting the coach and long-tail bays. Dumpling was reduced to the ranks; and I could not help thinking that he reproached me every time we met. My plough and cart frequently stood still, when they ought to have been moving, for the want of my principal hands, the coachman and footman. Every thing went wrong. Instead of selling I had to buy corn; instead of putting out money at

interest every year, I had to borrow—to put my name on the "lender's book." The wheat went for necessities and luxuries—we had a constant round of company; and every farmer knows how that operates. I gradually lost my spirits, my good humour, had my misgivings—saw breakers ahead, but did not change my course. At length I was obliged to mortgage my land. After that I resigned myself to my fate. I formerly delighted in improving it—but who ever improved a mortgaged farm? when it comes to that the game is nearly up—you may almost say, "Othello's occupation's gone."

Ruin now approached with rapid strides. My credit sunk—my neighbours began to prophesy; friends to be ceremonious, and shy, especially at vendues—sometimes remarking, *accidentally*, in my hearing, that they had come to a resolution not to be security for any one.

"Misery makes a man acquainted with strange bed-fellows."—I found it so—numberless evils, not foreseen, as the result of poverty, were now not only seen, but felt. Shifts for "raising the wind," and keeping up appearances, were resorted to that I do not like to remember. Friends fell off—creditors pressed—my note was no longer current at bank—crops, worse and worse. Interest accumulating—expenses undiminished—what was to be done? *Luckily* one of the servants (that is the fashionable phrase) *misbehaved*, and was sold to a negro trader—it went against my conscience—the idea that we had *eat him up*, though an odd one, haunted me continually. This expedient, not to say crime, served for a time; but, although repeated, again and again, it would not do. Suits were brought—judgments, executions and cash sales soon followed, and swept every thing by the board. The predictions of my neighbours were fulfilled—they "knew it would be so"—"pride must have a fall." I took pains to get a good master for Dumpling—as for the bays they were struck off to a jockey, who nicked, and sold them to a spendthrift, who is travelling the same road to ruin.

Adieu, Mr. Editor—avoid "double carriages" and long tail bays.

OLDSCHOOL.

THE TOMB OF WOMAN.

AN EXTRACT.

"For myself, I can pass by the tomb of a man with somewhat of a calm indifference; but when I survey the grave of a female, a sigh involuntarily escapes me. With the holy name of woman, I associate every soft, tender, delicate affection. I think of her as the young and bashful virgin, with eyes sparkling, and cheeks crimsoned with each impassioned feeling of her heart; as the kind and affectionate wife, absorbed in the exercise of her domestic duties: as the chaste and virtuous matron, tired with the follies of the world, and preparing for that grave into which she must so soon descend. Oh! there is something in contemplating the character of a woman, that raises the soul far above the vulgar level of society. She is formed to adorn and humanize mankind, to soothe his cares and strew his path with flowers. In the hour of distress she is the rock on which he leans for support, and when fate calls him from existence, her tears bedew his grave. Can I look down upon her tomb without emotion? Man has always justice done to his memory—woman never. The pages of history lie open to the one; but the meek and unobtrusive excellencies of the other sleep with her unnoticed in the grave. In her may have shone the genius of the poet, with the virtue of the saints; the energy of the man, with the tender softness of the woman. She too may have passed unheeded along the sterile pathway of her existence, and felt for others as I now feel for her."

MISCELLANEOUS.

PENSACOLA—CLIMATE, SOIL, PRODUCTIONS, &c.

(Extract from a private letter to the Editor.)

"Sir,— Pensacola, Aug. 3, 1826.

"The navy yard is laid out, and a few temporary buildings have been erected—next year, it is supposed, much work will be done on the buildings, walls, wharfs, &c. At present we have to dispute possession with the rattlesnakes.

This city fell short of my expectations—it is in a state of dilapidation, and the country around it miserably poor. The climate, however, is agreeable, and the people kind and hospitable. I met with an old acquaintance in the commander of the military here, Colonel Clinch, who, with a number of other gentlemen, has been very attentive to me. I have been to at least, (or might have been) half a dozen balls, to say nothing of dinner parties. Judging from appearances I should not expect the yellow fever to originate here. That which desolated the place in 1822, according to the account of the inhabitants, was produced by a cargo of damaged cod-fish. The water from springs is abundant and excellent. The bay affords good fish—the woods game—and our vicinity to New Orleans enables us to get almost any that we are able to buy, in a few days. The frost in 1822 killed all the orange trees in Louisiana and West Florida; but they are putting up again from the roots, and will bear next year. The fig is produced here in perfection. The vine makes but little figure; but it will, no doubt, do well. The Spaniards pay no attention to improvements, and the first swarm of adventurers after the transfer soon passed away. Many of the houses that brought fifty dollars per month rent, can now be had for ten. I know of several that are occupied rent free.

The gardens produced wonderfully to their looks. There is little or no soil—nothing but white sand, the reflection from which is disagreeable and hurtful to the eyes. Bathing in the bay is much practised, and is a luxury within the reach of all.

The good land in the Territory is estimated at only 250,000 or 300,000 acres. That around Tallahassee, the seat of government, is of a sandy loam, and produces corn, cotton, and sugar cane abundantly. A fine tract of U. States lands will be sold next winter, on the Chipola—a stiff soil. The best uncleared lands will not bring more than ten dollars per acre. I have been much amused with the account of a journey from St. Augustine to this place, on horseback—about 500 miles. The gentleman swears that he would sooner return to the United States by way of China, than go back the same route.

This is the land of flowers—the cape jasmine is abundant, but the most beautiful shrub I ever saw is the fringe myrtle—I must try and send you some of the seed when ripe.

THE CHILLICOTHE TWIN CALVES.

A Steer and a Heifer, raised by George Renick, near Chillicothe, were seven years old last spring; and for size and beauty far exceed any animals of their kind ever produced in the western country, or perhaps in America. The steer is 16 hands high, is 9 feet 6 inches long from the top of the head to the root of the tail, measures 10 feet round at the girth, and 10 feet 10 inches at the thickest part of his body, and weighs 2,996 pounds.

The Heifer has not been sufficiently docile to admit of her measurement or weight being taken; but is supposed by the best judges to be within 200 pounds of the weight of the Steer, and is undoubtedly the finest ever raised in America.

The following certificate of the weight of the Steer is added for the satisfaction of the publick:

Publick Hay Scales, Chillicothe, Nov. 9, 1822
I hereby certify, that I this day weighed a brin-

dle Steer, one of the Chillicothe twin calves, the property of Mr. George Renick, and found the weight to be two thousand nine hundred and ninety-six pounds.

JACOB EIKELBURNER, weigh master.

State of Ohio, Ross county, Mayor's Office, Chillicothe, ss.

I, Levin Belt, mayor of the town of Chillicothe, do certify, that Jacob Eikelburner, who signs the above weight of Mr. George Renick's Steer, has been regularly appointed by the council as our weigh master, and that faith and credit is due to all his certificates as such.

In testimony whereof, I have hereunto subscribed my name and affixed the seal of my office, this fourteenth day of November, in the year one thousand eight hundred and twenty-two.

LEVIN BELT, Mayor.

[The live weight of Mr. Barney's Ox, Columbus, was 2,962, (see Am. Farmer, vol. 1, page 4.) It is to be regretted that we are not told of what breed these calves were.]

ITEMS.

(From late English Papers received at the Office of the American Farmer.)

It was unusually sickly at Liverpool, and other places, occasioned as was supposed by the extreme heat of the summer.

In Manchester and Salford, there are thirty thousand individuals who receive relief from the subscription fund, in addition to those who are partly supported out of the poor rates. These rates, including 10,000*l.* paid by the county, amount to 50,000*l.* per annum, and fall at present as a tax on rental to the extent of 3*s* in the pound.

Norwich, Aug. 4.—It is much to be regretted that at a period like the present, provisions of all kinds are excessively dear; mutton and beef are selling as high as 9*d* and 10*d* a pound—veal has risen from 6*d* to 10*d*.

SPORTING OLIO.



LONG ISLAND RACES.

The Union Course Races, on Long Island, commence on the third of October next:

First day, four mile heats, for . . .	\$500
Second day, three mile heats, for . . .	300
Third day, two mile heats, for . . .	200

[Times.]

TROTTING MATCH.

A trotting match took place at two o'clock yesterday, on the Union Course, near Jamaica, Long Island, between a sorrel cropped horse and a bay mare; both owned by gentlemen of this city. The distance trotted was one mile and repeat, and the wager, \$500.

For three-fourths of the first mile the mare kept the lead; but on commencing the last quarter, the crop showed his superior foot, passed his antagonist, and came out about two thirds of a length

ways selected as an annual offering to the venerable CARROLL, of Carrollton, on his birth-day. The last of these recurred on Wednesday last, the 20th inst. when in fine health and spirits he received the heartfelt congratulations of his family and friends, at his manor, on Elkridge. It was highly gratifying to see the last surviving signer of the Declaration of Independence passing into his *ninetieth* year, still exhibiting so perfect a model of elegant manners, such a happy example of cheerfulness and intellectual refinement, erect and sprightly as any of the party; left, as it would seem, by Providence, to inculcate by their *visible* fruits the inestimable value of temperance, cleanliness, regularity in diet, and bodily and religious exercises, and a wise government of all the grosser passions. He plunges into his limestone spring bath every morning before sunrise, and still rides on horseback with pleasure in good weather. A large portion of the day is devoted to reading. Having received, at St. Omers, the best classical education, he has always retained his partiality for Latin and French literature.

BUSSORAH.—The very beautiful sorrel Arabian horse, Bussorah, which was imported into New York, a few years past, and there sold for upwards of \$4000, is now standing to cover mares, and will remain at Fair-View, Potter's Race Course, for a month to come.

This stallion is from the land of JOB, who, we have no doubt, was a good judge of horse flesh, and wrote under the inspiration of a grateful and generous attachment, when he pronounced on that noble animal the much admired eulogy:—

"Hast thou given the horse strength? Hast thou clothed his neck with thunder? Canst thou make him afraid as a grasshopper? The glory of his nostrils is terrible. He paweth in the valley, and rejoiceth in his strength. He goeth on to meet the armed men. He mocketh at fear, and is not affrighted: neither turneth he his back from the sword. The quiver rattleth against him, the glittering spear, and the shield. He swalloweth the ground with fierceness and rage: neither believeth he that it is the sound of the trumpet. He saith among the trumpets, ha! ha! and he smelleth the battle afar off, the thunder of the captains, and the shouting."

Bussorah is not, we should think, fifteen hands but is of perfect symmetry, with marks of great strength and activity.

Of the celebrated Godolphin Arabian, the source of the best English racing blood, we have in our library a portrait taken by Stubbs, and the following remarks by Lawrence, who says he was "in reality a Barb."

"This Arabian was fifteen hands in height, of great substance, of the truest conformation for strength and action, bearing every indication of a real courser—a horse of the desert. His colour was entire brown bay, with mottles on the buttocks and crest, excepting a small streak of white upon the hinder heels. He was imported into France from some capital or royal stud in Barbary, whence it was suspected he was stolen, and said to have been foaled in 1724. So little was he valued in France, that he was actually employed in the drudgery of drawing a cart in the streets of Paris. Mr. Coke brought him over from France, and gave him to Williams, master of the St. James' Coffee House, who presented him to the Earl of Godolphin. During the years 1730 and 1731, the Arabian served in that noble Sportsman's stud as teaser to his stallion Hubgoblin, which horse refusing to cover Roxana; she was in consequence put to the Arabian, and produced a colt foal, the famous *Lath*, the most elegant and beautiful, as well as the best racer of his time. The mutual attachment between the Godolphin Arabian and a stable cat, is well known. He died in 1753, the most successful as a

stallion of any foreign horse, before or since imported."

We hope the farmers of Maryland are beginning to open their eyes to the practicability and the profit of getting deeply into the blood. Why do not respectable farmers, who unite means and spirit, get a *fine blooded horse in each county*? If they doubt the profit of it, let them look at the sale of Mr. Field's horses in Virginia, a few days since. There a single horse sold for \$3500, a mare for \$1650; and seven, the whole number, averaged about \$1000 each.

In our own state, two gentlemen in Cecil county, were deemed extravagant for sending their mares to New York and paying \$50 for the services of Eclipse; but not long after, it was stated that they had been offered \$500 for each colt, which they refused. We now happen to know that as to one of these colts, a gentleman farmer of Ohio would have been glad to have gotten him (now two years old,) for \$1000, if he could have done it, a few days since. And what was his object? Why, be it known to our Maryland readers, it was not for the pleasures, or the hazards of the turf; but to rear horses from large mares, for sale as carriage and saddle horses, in Baltimore and elsewhere in Maryland!! Hence we see that for a single thorough bred colt of two years, a price might be had equal to the tobacco product of a large farm.

HORTICULTURAL AND AGRICULTURAL SOCIETY OF JAMAICA.—A society, with the above title, has been established in Jamaica under very favourable auspices. The following gentlemen are among the officers of this institution: Patron, His Grace William, Duke of Manchester, &c.—President, Edward Nathaniel Bancroft, M. D., Fellow of the Royal College of Physicians, &c.—Vice Presidents, Honourable John Mais, Samuel Murphy, Esq.—Treasurer, Robert Smith, Esq.—Secretary, John Miller, M. D.—Honorary Members of the Council, The Right Reverend the Lord Bishop of Jamaica—The Hon. William Anglin Scarlett, Chief Justice—The Hon. William Burge, Attorney General. George Manners, Esq., His Britannic Majesty's Consul, in Boston, and J. S. Skinner, of Baltimore, are elected Honorary Members to this Society.

WE understand that Doctor Muse, of Dorchester county, has 30 acres of cotton, which has been visited lately by several gentlemen from the South, who all declare it to be *not surpassed*, if equalled, in their South Carolina climate. His cotton (wholly upland,) is, one third of it, five feet high; the remainder from three to four feet, all heavily loaded with pods and flowers. He was to have a heavy gathering in a few days after the 6th instant, much being then ready. It is believed that he will have thirty thousand weight of seed cotton; yet the season is said to have been peculiarly unfavourable, and he is at least six weeks later in his crop, from the drought, than in common years he would be. Not more than three acres of his ten of *Palma Christi* escaped destruction from the drought and mole. This little animal has been said to be peculiarly annoyed, and even expelled by this plant. But Doctor Muse can offer the testimony of all his neighbours, that it is singularly attractive of the mole, which delights to operate in the hills containing it, and to feed on it, in all its stages of growth. The parcel preserved was fine, and nearly all ripe and sound on the 6th September, (inst.)

OUR tobacco Planter friends are aware that we are not inattentive to their interest, but in very truth, their staple commodity has been for a long time so much depressed that it has depressed us to think of it. A highly respectable and most judicious Planter, one of the Electors from Prince

Georges, after having been here some days, with the best opportunities of knowing, told us that he thought the prices worse than they had been at any time since the war. The best Prince Georges will not bring more than \$8.

Waverly butter sold readily in the market this morning at 37½ cents per pound. Peaches for 50 cents per peck, of common quality. Pears, the best, for \$1 per peck. Beef, best pieces, for 8 cents per pound. Watermelons, the best, for 10 cents.

FOR fear of mistake, and as this is the last paper that will be issued prior to the meeting, it is again stated that the next meeting of the Trustees of the Maryland Agricultural Society is appointed for *Thursday next*, at *Brookland Wood*, the seat of R. Caton, Esq.

AN EXCHANGE PROPOSED.—A very handsome Pointer Pup for a good running Fox Hound.

FIGS have been unusually fine this season. One was left on our table, last week, by Mr. A. Boyd, which measured seven inches in circumference.

WANTED.—A small Farm, of about 75 or 100 acres, within seven miles of Baltimore, for a dairy farm. Inquire at the office of the American Farmer.

[COMMUNICATED.]

As people begin to understand the true qualities and superior value of thorough bred horses, a constant reader of the American Farmer will thank any gentleman who can supply for the "sporting olio" in that paper, the pedigree of Tuckahoe, running back four generations on each side. Rumours are afloat that one of the streams is not clear.

DORCHESTER COUNTY CATTLE SHOW AND FAIR.

The Dorchester Agricultural Society, will hold their 2d Cattle Show in Cambridge, on *Thursday* and *Friday*, the 9th and 10th November next, 1826; to commence each day at 8 o'clock, A. M.

The first day will be allotted to the exhibition of Domestic Animals, Domestic Manufactures, Liquors, and Butter, as set forth below. In the afternoon, at 2 o'clock, an Auctioneer will dispose of, free of cost to the seller, any stock that may be for sale.

The second day will be devoted to the exhibition of Implements of Husbandry and the Ploughing Matches. At 9 o'clock the ploughing will commence. Lots of 1-16th of an acre will be laid off.

At 1 o'clock, the reports will be read and the premiums distributed to the successful competitors. At 3 o'clock P. M. the sales will be renewed.

Premiums, in appropriate pieces of silver plate.

CROPS.

For the best five contiguous acres of Wheat, to be not less than 30 bushels per acre,	\$8 00
For the best five contiguous acres of Corn, to be not less than 50 bushels per acre,	8 00
For the best five contiguous acres of Hay, to be not less than ten tons,	8 00
For the best entire half acre of Potatoes, to be not less than 250 bushels per acre,	8 00
For the best acre of Carrots, not less than 400 bushels,	8 00
For the best acre of Mangel Wurtzel, not less than 800 bushels,	8 00

Volunteered by a Member.

For the largest crop of Seed Cotton,

HORSES.	
For the best Stallion,	10 00
For the best Mare,	8 00
For the best Colt under two years,	5 00
NEAT CATTLE.	
For the best Bull over two years,	10 00
For the second best Bull over two years,	5 00
For the best Bull under two years,	8 00
For the second best Bull under two years,	3 00
For the best milch Cow,	5 00
For the second best do.	4 00
For the best Heifer under two years,	5 00
For the second best Heifer under two years,	4 00
For the best pair of well broke Oxen,	5 00
For the second best do. do.	3 00
For the best fatted Bullock,	5 00
SWINE.	
For the best Boar over one year,	5 00
For the second best Boar under one year,	5 00
For the best breeding Sow, litter of pigs to accompany her,	5 00
For the best Sow Pig under ten months old,	3 00
For the best Boar Pig do. do.	3 00
For the fattest and heaviest Hog, live weight,	3 00
SHEEP.	
For the best Ram,	5 00
For the second best Ram,	3 00
For the best Ewe,	5 00
For the second best Ewe,	3 00
For the best lot of Wethers, not less than six in number,	6 00
DOMESTIC MANUFACTURES.	
For the best bolt of Flannel, not less than ten yards,	4 00
For the best piece of Kersey, not less than twenty yards,	4 00
For the best Linsey, not less than ten yards,	4 00
For the best Carpeting, not less than twenty yards,	5 00
For the second best Carpeting,	4 00
For the best Hearth Rug,	4 00
For the second best do.	3 00
For the best Counterpane,	4 00
For the best Linen Sheet, not less than ten yards,	4 00
For the second best Linen Diaper, for table cloths, not less than ten yards,	4 00
For the best towelling Linen Diaper, do.	4 00
For the best pair knit Woollen Stockings,	2 00
For the best pair knit Cotton do.	2 00
IMPLEMENTS OF HUSBANDRY.	
For the best Agricultural Implement that may be considered new and worthy of patronage,	5 00
BUTTER.	
For the best fresh Butter, not less than 5 lbs.	4 00
For the second best do. do.	3 00
For the best potted Butter, not less than three months old, nor less than 10 lbs.	4 00
For the second best do. do.	3 00
FERMENTED LIQUORS.	
For a sample of the best barrel of Cider of any age,	4 00
PLOUGHING MATCHES.	
For the best Ploughing by two horses,	6 00
For the second best do. do.	5 00
To each successful Ploughman, \$3,	6 00

COMMERCIAL RECORD.

"Liverpool, August 8.

"There has been a steady demand for cotton since our report of the 29th ult. Dealers and spinners have purchased rather freely, and shew more confidence in an improvement of the trade than for some time past. The prices of last week are fully sup-

ported, and some descriptions have a tendency to advance. The public sale of Sea Islands, was well attended, and as much or more sold than was generally expected, and at prices nearly or quite equal to the immediate preceding business by private, but at a decline of $\frac{1}{4}$ to $\frac{1}{2}$, on the last public sale. The sales by private from the 29th to the 4th inst. inclusive, amount to 13,120 bags, including of American, 548 Uplands; at $5\frac{1}{2}$ to 7d. averaging 6 3-16d; 800 Orleans, 5 3-8 to 8 1-2; 3,210 Alabamas, $5\frac{1}{2}$ to 7, and 140 Sea Islands.—There were offered at public sale, 1,545 bales Sea Islands, of which 892 were sold at 11 to 15 1-4d; 425 do stained, of which 347 sold at 5 to 8 1-2d. Of the above 500 bags were taken for export, and the same quantity on speculation.

On Saturday, and yesterday, there was a moderate business doing at steady prices and the sales estimated at 2,500 bags.—Import from the 29th to 4th instant, 12,283 bags.

To-day, up to 1 P. M. there has been but a very moderate inquiry for cotton, and more offering in the market.

The import of cotton this year, up to the 1st inst. from the U. States, into the principal ports, has been 289,476 bales, viz. from N. Orleans, 67,049; Savannah 76,884; Charleston, 70,342; other ports, 58,582. The total import from the United States in the whole of 1825, was 283,666 bales, being 5,810 bales less than in the first seven months of 1826. The imports this year from other parts, have been, from Portugal and Brazil, 30,642; East Indies, 53,664; West Indies, &c. 8,635; Mediterranean, 32,617. In the year 1825, the import from those parts, were as follows, Portugal & Brazil, 119,645; East Indies, 36,363; West Indies, &c. 16,587; Mediterranean, 59,223. Total, 231,817. or 106,260 more than in the first seven months of 1826.

RESULT.

Total import in the year 1825, 515,484.

Do. in first seven months of 1826, . . . 415,034.

Extracts from letters of Aug. 9.

"The John Wells being detained, we may now state our cotton market keeps steady, and there is a fair demand to day. The accounts from Manchester of yesterday's market, are rather more favourable. There was but little done in yarns, but for goods there was a fair demand.

London, August 5.

The sales of cotton this week, have been about 3,500 bags, chiefly Surats at $4\frac{1}{2}$ to $5\frac{1}{2}$, nearly the whole for export.

The purchasers of Tobacco are inconsiderable, but there are renewed inquiries, particularly for the N. of Europe. About 100 hhd. Va. were bought yesterday at $3\frac{1}{2}$ to $3\frac{3}{4}$.

A letter from Liverpool of the 8th, says, "our latest accounts from Manchester are rather less unfavourable. The yarn market is quiet, and no advance has been realized, but there is a trifling advance in some descriptions of goods." Our London letters state "there seems a general impression of gradual improvement. The weather is very fine for the harvest, and the corn market is very dull."

Of 12,000 bales imported at Liverpool the week ending August 5th, 6,000 were from Egypt.

CONTENTS OF THIS NUMBER.

Art of Breeding, Mr. Powell's queries answered by Mr. John Barney, of Delaware, on Breeding closely in, on Mixing Distinct Races, on the Combination of several Varieties in one Breed—On Yolk, as an indication of the fineness of Wool, by Columella—The Accomae, or Magoth Bay Bean—Hints on the Manufacture of Currant Wine—On Gardening—Chesapeake and Ohio Canal—On Expensive Living—The Tomb of Woman—Climate, Soil, Productions, &c. of Pensacola—Chilliothe Twin Calves—Items from English papers—Long Island Races—Trotting Matches—Leaping—Pedestrianism—Cub Marc—The Huntsman's Call—Recipes—Editorial—Dorchester Agricultural Society's premiums for 1826—Commercial Record.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams,	lb.	5	8	9	12
BEES-WAX, Am. yellow	—	30	31		50
COFFEE, Java,	—	16 $\frac{1}{2}$	17	20	22
Havana,	—	15	16 $\frac{1}{2}$		20
COTTON, Louisiana, &c.	—	11	13		
Georgia Upland,	—	10	12		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent each number to No. 18.	—				
CANDLES, Mould,	—	12 $\frac{1}{2}$	14	16	18
Dipt,	—	11			14
CHEESE,	—	8 $\frac{1}{2}$	9 $\frac{1}{2}$	12	15
FEATHERS, Live,	—	30		37	
FISH, Herrings, Sus.	bbl.	2 37 $\frac{1}{2}$			
Shad, trimmed,	—	5 50	6 00		
FLAXSEED, Rough,	bush	75	80		
FLOUR, Superfine, city,	bbl.	4 50		5 25	6 00
Fine,	—	4 25			
Susquehanna, superfi.	—	4 00			
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	60			
white	—	65	68		
Wheat, Family Flour,	—	85	95		
do. Lawler, & Red, new	—	75	82		
do. Red, Susque.	—	80	83		
Rye,	—	55	60		
Barley,	—	80	1 00		
Clover Seed, Red	bush	4 50		5 00	
Ruta Baga Seed,	lb.	1			
Orchard Grass Seed,	bush	2 00		2 50	scarce
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed,	—	3 00		3 50	
Oats,	—	40			
Beans, White,	—	1 50	1 70	1 87	
HEMP, Russia, clean,	ton	215			
Do. Country	—	120	130		
HOPS, 1st sort,	lb.	12		25	
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	7			
Bar	—	7 $\frac{1}{2}$	8		
LEATHER, Soal, best,	—	22	23	32	
MOLASSES, sugar-house	gal.	46	50	62 $\frac{1}{2}$	75
Havana, 1st qual.	—	30		37 $\frac{1}{2}$	
NAILS, 6a20d.	lb.	6 $\frac{1}{2}$		9	
NAVAL STORES, Tar,	bbl.	1 50	1 62 $\frac{1}{2}$		
Pitch,	—	2			
Turpentine, Soft,	—	1 75			
OIL, Whale, common,	gal.	27		40	
Spermaceti, winter	—	70	75	88	
PORK, Baltimore Mess,	bbl.	11 00	11 50		
do. Prime,	—	8 50			
PLASTER, cargo price,	ton.	4 00			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2 $\frac{1}{2}$	3	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5 $\frac{1}{2}$	7 $\frac{1}{2}$	10	12
WHISKEY, 1st proof,	gal.	32	34	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	33		50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	9 50	9 75		
Louisiana,	—	8 75	9 75	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves,	—	70		1 00	
Ginger, Ground,	—	7	12	12	18
Pepper,	—	16 $\frac{1}{2}$		25	
SALT, St. Ubes,	bush	43		75	
Liverpool ground	—	46	47	75	
SHOT, Balt. all sizes,	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Claret,	doz.	4	8	5 00	8 00
Port, first quality,	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country,	—	18	22		
Skinners' or Pulled,	—	20	25		

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AGRICULTURE.

ON THE MANURE OF LAND.

Occasioned by some agricultural speculations of Professor Mitchell, of North Carolina.

Sir Humphrey Davy so beautifully illustrates this subject, that I cannot forbear commencing my observations on the Professor's speculations, by quoting the words of Sir Humphrey.

"The doctrine of the proper application of manures from organized substances, offers an illustration of an important part of the economy of nature, and of the happy order in which it is arranged.

"The death and decay of animal substances tend to resolve organized forms into chemical constituents; and the pernicious effluvia disengaged in the process, seem to point out the propriety of burying them in the soil, where they are fitted to become the food of vegetables. The fermentation and putrefaction of organized substances in the free atmosphere, are noxious processes; beneath the surface of the ground they are salutary operations. In this case the food of plants is prepared where it can be used; and that which would offend the senses and injure the health, if exposed, is converted by actual processes into forms of beauty and of usefulness. The fœtid gas is rendered a constituent of the aroma of the flower, and what might be poison becomes nourishment to man and to animals."

Let us now proceed to Professor Mitchell:

"The proper management of the manure collected in his farm yard, is an important item in the duties of an agriculturist."

This is a fact quite undisputed.

"Southern climates offer greater impediments to the growth of grass than more northern latitudes."

This is a fact as to grass; but it is a query (although none with me,) whether there are not other things which, in the bounteous disposition of nature, have been given to supply its place.

"The climate is less favourable to the growth of the ox."

They may not attain the gigantic size and Lambert-like weight of the British cattle; but it is a fact that there is no sweeter or better tasted meat under the sun.

"The climate renders it less an object with the planter to raise the ox and to discover vegetables on which he may subsist."

I should suppose the object to be greater, inasmuch as there certainly is so much wanted; and the greater the difficulty the higher the price, and of course the more ample the recompense.

"Finally, the winters are so much shorter that the quantity of manure is much reduced."

This is correct, if for manure Providence had limited us to the mere excrement of the animal; but, that not being the case, all these assertions, except the first, are what Junius would call "false facts."

An "intelligent" American has discovered the "glaring imperfection of French agriculture," to be a "deficiency of manure;" that "the number of cattle are not equal to its (the kingdom's) wants;" and, that "the mode of supplying the deficiency of animal manure," namely, that of increasing "the number of cattle," is not "generally understood."

This "intelligent" traveller confines the Professor's views by not "attributing it to any imperfection in the agriculture of France, but to the climate"—in fact, to nature "herself."

But "France has no reason to complain of the allotments of heaven." Here Professor M. is correct. All that she has to complain of is, her inaptitude to improvement; arising, by the bye, from the simplicity of life evident in the character of her peasantry.

"North Carolina," adds the Professor, "has a soil and climate favourable to the production of Indian corn, wheat, tobacco, cotton and rice;" and, for her

to expect to raise cattle to compare with those of northern latitudes and cooler climates, is to expect "an incompatible blessing;" and, his grand and very strange conclusion is, that there are no means of reclaiming the old fields of our ancestors, and of course that "they are to be condemned like the Deserts of Arabia to everlasting barrenness and sterility, unless some vegetable of vigorous growth, which shall cover our fields from the burning sun during the heat of summer; and, in the fall, shall furnish a large body of vegetable matter to be ploughed in for the enrichment of the soil," shall be discovered. And, this is "the great desideratum."

Now, with all due deference, I acknowledge this to be a desideratum; but humbly contend there are still greater desiderata.

"Agricultural chemistry," said Sir H. Davy, "has for its objects all those changes in the arrangements of matter connected with the growth and nourishment of plants; the comparative values of their produce as food: the constitution of soils: the manner in which lands are enriched by manure or rendered fertile by the different processes of cultivation. Inquiries of such a nature cannot but be interesting and important, both to the theoretical agriculturist and to the practical farmer. To the first, they are necessary in supplying most of the fundamental principles on which the theory of the art depends. To the second, they are useful in affording simple and easy experiments for directing his labours, and for enabling him to pursue a certain and systematic plan of improvement."

If I may be permitted to give an opinion, I would say, that such ideas were more consonant with the rank of a newly erected Professor's chair, than a broad declaration, that the agriculture of a state depends on the discovery of a vegetable "to furnish a large body of matter to be ploughed in for the enrichment of the soil." For, to confirm my opinion by that of Sir H. Davy, it may be observed, that it is scarcely possible to enter upon "any investigation in agriculture without finding it connected, more or less, with doctrines or elucidations derived from chemistry."

Nor, can what I apprehend to be an irrevocable law of nature, namely, that her processes never exhaust a soil, or deny the means of reproduction, almost (I was going to say,) to infinity, by an application of the ordinary means of human industry, be forgotten; for in the words of Sir H. Davy, "nature, amidst all her changes, is continually directing her resources towards the production and multiplication of life; and in the wise and grand economy of the whole system, even the agents that appear injurious to the hopes and destructive to the comforts of man, are in fact ultimately connected with a more exalted state of his powers and his condition. His industry is awakened, his activity is kept alive, even by the defects of climates and seasons. By the accidents which interfere with his efforts, he is made to exert his talents, to look farther into futurity, and to consider the vegetable kingdom, not as a secure and unalterable inheritance, spontaneously providing for his wants; but as a doubtful and insecure possession, to be preserved only by labour, and extended and perfected by ingenuity."

Has the Professor never heard of the theory of Captain Pury, who, in a memoir addressed, first to Louis XV. or the Regent, and afterwards to George II., endeavoured to, and, in my humble opinion, did, establish it as a fact, that this very State (the means of increasing the products of which and adding to the value of the soil, are now in discussion,) is within the favoured belt of the habitable globe which unites the advantages of the whole? He settled Purysburgh, on the Savannah.

But, chemically speaking, is the Professor correct in his scheme of "covering the soil?" "The action of the sun," said Sir H. Davy, "upon the surface of the soil, tends to disengage the gaseous

and the volatile fluid matters that it contains; and heat increases the rapidity of fermentation; and in the summer fallow, nourishment is rapidly produced, at a time when no vegetables are present capable of absorbing it."

Here I have reached the period of my book learning. I may now be permitted to state what I apprehend to be the cause of the wretched condition of the soil generally in the United, but more especially in the Southern, states.

I will commence by saying, that I would address every planter of the Southern states in the words of the great Lord Burleigh to his son: "Live not in the country without corn and cattle about thee. For he that putteth his hand to his pocket for every expense of household, is like him that putteth water into a sieve. And what provision thou shalt want, learn to buy it at the best stand. For there is one penny saved in four betwixt buying in thy need and when the markets and season serve fittest for it. Keep rather two servants too few than one too many. Feed them well and pay them with the most; and then thou mayst boldly require service at their hands."

This is advice which, although given in the reign of Elizabeth, is applicable to the actual planter of the Carolinas in 1826.

The first great error has been in the quantity of land taken into cultivation. The axe has been freely used, and, as soon as the soil has been exhausted, the land has been turned out and suffered to waste; and, if in a hilly situation, to become useless, owing to the washing of the rains.

The consequence has been a scarcity of corn and abandonment of every means offered by the system of soiling, partially or generally, and the leaves of the forest.

Let the planters keep their idle land enclosed, and sufficient for a rest every two years, and there will be not only little exhaustion, but the land will, under such care, become nearly equal to new land.

In fact, the starvation system has been the ruin of the whole country; for it will invariably be found that wherever planters have bought corn, they have gone backward—and vice versa.

I could quote many examples to prove that the allowancing gentry and the great calculators, who, as I have heard, calculate so closely, as to know the quantity of grit their chickens consume, have all gone backward and into debt; while those who know not what it is to have a lock on their corn cribs, have uniformly advanced and increased their property.

To what may be ascribed the superior wealth of North Carolina, when compared with South Carolina? Its immense provision trade; in short, its abundance and the consequent division of its property, and this in its turn producing a wholesome, active and useful population.

As to manure, as long as the forest tree produces leaves there will be abundance. I think I could name an estate, that hauls out 1500 to 2000 large wagon loads from its cow yard, constructed for the purpose, in the course of a season. This estate has not for years planted an acre of new land. It is now better than ever.

As to the cultivation of old fields, I could procure other proofs, in the fortunate results to estates thought to be in a state of bankruptcy, by a cautious adherence to an improved system.

As to fallows, I would observe the Professor's idea of a plant to cover the ground, and thus having a "rotation without fallow," is not unsanctioned. It will be found at large in a "Treatise on Soils and Manures," by a Practical Agriculturist—Philad. 1821. Ralph Robinson, (in fact, George III.,) in 1790, thus closes one of his letters: "Thus his (Mr. Duckett's,) land, although never dormant, is continually replenished by a variety of manures, and thus unites the system of continued pasture with cultivation.—Treatise, p. 56.

As to the soiling system, to which abundance is only necessary, it would be useless to say one word on the subject, except to call the attention of Professor Mitchell to this important branch of agriculture.

But, to recur to his idea of "covering the ground," I would observe, that the cow pea was long since termed by an old Englishman (who settled in this country before the revolution, and whose industry and intelligence were equal to his honour and his honesty,) the clover of Carolina. There it may be used in all ways, and in each it is highly useful, whether it is fed in the field, whether the pod is gathered, or whether it is all brought in for winter fodder.

The Professor will, I hope, excuse me for the frankness of these animadversions. They have been rendered necessary by his total silence on the great and real causes of our complaints—idleness, and such a forgetfulness of the change of times, as would enable an old farmer of the times of Queen Anne fully to recognize the system of his own days, in those of 1826; the same system when land is sold for twenty dollars, and when it was to be had for the expense of survey!

Bitter experience will teach the good people of this country that Lord Burleigh's advice is good, and should be attended to.

But, now that I have said all I wished, and more than I intended to say, I will conclude by expressing a regret that all will be in vain, while there is such a spirit in our youth to overload the professions of law and physic as there is at present. These create such an overflow as to crush the hopes and darken the prospects of nine out of ten young men; for more than a tythe can never hope for success in either of these professions. And to physic and law may be added commerce, the ranks of which are also so crowded—so crowded as that the people of the United States only "present the spectacle of a vast assemblage of jealous rivals, all eagerly rushing to the seaboard, jostling each other in their way, to hurry off to the glutted foreign markets the perishable produce of their labour;" and, at the instant when, owing to the want of communication, some parts of the country are actually suffering for what is thus going abroad to these very glutted markets.

AMPHICON.

P. S. As to the impossibility of having good cattle in either North or South Carolina, the Professor is very incorrect. Fine, large, prime milk-giving cattle are to be found in Mecklenburg and Rowan, and sell at 60, 70 and \$80. There is a very excellent stock in the vicinities of Columbia and Statesburg, stock that would not disgrace, but grace any farm yard in England. To the increase of the breed, the country is indebted to the liberality of some of the proprietors; while on the other hand, in other places, they are so selfish as to do every thing to make it a monopoly, by asking such prices as to preclude the purchase by lesser farmers; of course, exclude the country from the benefits of their stock. The western parts of Virginia, North Carolina, and Tennessee, are much indebted to Secretary Clay for an improvement of the stock of his neighbours.

AGRICULTURAL SOCIETY OF THE VALLEY.

Premiums for the next Fair.

At a meeting of the Trustees of the Agricultural Society of the Valley, held at the residence of Wm. M. Barton, Esq., on Monday, 29th of May, 1826—present, William M. Barton, John W. Page, Isaac Hollingsworth, Joseph Kean, Joseph Hackney, Wm. Smith, David Bryarly, Seth Mason, John W. Bayliss, and Alexander S. Tidball.

A letter from Wm. B. Page, enclosing a communication from E. Ruffin, Esq., was received, and the communication from Mr. Ruffin ordered to be printed.

* Now, July, 1826, for instance, flour at New Orleans, Charleston, \$4.50—Columbia, 9 to \$10.

The following scheme of Premiums for the Fair to be held the ensuing fall, was offered and adopted:

CROPS.

For the best ten acres of Wheat, . . .	\$15 00
For the second best do. do.	10 00
For the best two acres of Wheat, . . .	5 00
For the best ten acres of Corn, . . .	12 50
For the second best do. do.	7 50
For the best ten acres of Oats, . . .	5 00
For the best acre of Potatoes, . . .	10 00
For the best half acre of do.	5 00
For the best ten acres of Barley, to be offered at the fall meeting of 1827, . . .	5 00
For the best acre of Turnips, . . .	5 00
For the best 1/2 acre of Hemp, 5 lbs. of which, dressed, are to be exhibited as a sample, . . .	5 00
For the best half acre of Flax, . . .	2 50
For the best specimen of Hemp, dressed by a machine located in one of the counties of Frederick, Berkeley, Jefferson, Hampshire, Hardy, or Shenandoah—quantity exhibited not less than 50 lbs., a premium of . . .	10 00

FARMS.

To the owner or cultivator of the best organized and improved Farm, (of at least 50 acres in cultivation,) considered in relation to, 1st. farm buildings; 2d. yards and manures; 3d. fences and general divisions; 4th. orchard and garden fruit; 5th. live stock; 6th. implements of husbandry, . . .

Resolved, That application be made to the society at its next meeting, to offer to the person who shall have made the best average crop the present year, from a farm of not less than 50 acres, having reference to the labour employed and the state of the land when it came into possession, a premium of . . .

Report to be made, and the premium to be awarded at the next March meeting.

FENCES.

To the person who has made the most permanent fencing during the present year, taking into consideration the number of hands employed, . . .

ANIMALS.

For the best full bred stallion, kept in the Valley during the present season, . . .	10 00
For the best stallion, calculated for the draught, kept in the Valley during the present season, . . .	5 00
For the best Colt under four years old, raised in the Valley, without regard to sex, . . .	10 00
For the second best do.	5 00
For the best brood Mare, . . .	10 00
For the second best do.	5 00
For the best riding Horse raised in the Valley, . . .	10 00
For the best Bull over one year old, . . .	5 00
For the second best do.	2 50
For the best bull Calf under one year old, . . .	5 00
For the best yoke of Oxen, . . .	10 00
For the second best do.	5 00
For the best Milch Cow, . . .	5 00
For the second best do.	2 50
For the best brood Sow, . . .	2 50
For the best lot of five Sheep, . . .	5 00
For the best Ram, . . .	5 00
For the best Heifer, . . .	5 00
For the best Mule under two years, . . .	5 00
For the exhibition of a Cow of the improved short horned breed, to be retained in the Valley, . . .	\$10 00

MANUFACTURES.

For the best ten yards of Woollen Cloth, 6-4 of a yard wide, . . .	5 00
For the best ten do. do. 4 do.	5 00
For the second best do.	5 00
For the best ten yards of Flannel, . . .	5 00
For the second best do.	2 50
For the best twenty yards of Carpeting, . . .	10 00
For the second best do. do.	5 00
For the best pair of Blankets, . . .	5 00
For the second best do.	4 00
For the best ten yards of bleached Linen, either of flax or hemp, . . .	5 00
For the second best do.	4 00
For the best ten yards of table Diaper, . . .	5 00
For the second best do.	4 00
For the best straw or grass bonnet, . . .	2 50
For the best Hearth Rug, . . .	5 00
For the second best do.	2 50
For the best ten pounds of Butter, . . .	2 50
For the best twenty pounds of Cheese, . . .	2 50
For the best ten yards of Linsey, . . .	5 00
For the best fifteen yards of Cassinet, . . .	5 00
For the best pair of woollen Stockings, . . .	1 00
For the best pair of flax or hemp do.	1 00

PLOUGHS AND PLOUGHMEN.

For the best barshear Plough, to be tried on the second day of the fair, . . .

To the person who shall be considered the best Ploughman, . . .

Ordered, That there shall be a premium of \$10 awarded to the person who shall attend the fair clad in the best suit of domestic manufacture, the raw material of which has been raised and spun in his own family, with the exception of such cotton yarn as may be used in the fabrick.

Ordered, That there be placed in the hands of the committee on manufactures, for discretionary premiums, the sum of \$25.

Ordered, That all woollen goods offered for competition, be manufactured of wool grown in the Valley.

Ordered, That no article shall receive a premium, which has not been manufactured in some county furnishing a member of this society.

Test, A. S. TIDBALL, Sec'y.

PROSPECT OF CROPS.

Savannah, Geo., Sept. 12, 1826.
Sir,
"The rice crops on our river are very good; we are in the midst of harvest, which has been much put back by frequent showers. The cotton crops will be good, should the caterpillar keep off; a few are seen in various places, but they do not spread."

HORTICULTURE.

MANUFACTURE OF SILK IN MISSOURI.

J. S. SKINNER, Esq. St. Charles, Mis. Aug., 28, 1826.

Sir,—As the culture of silk has become a subject of considerable importance in the United States, permit me to give you for the Farmer, the result of a little essay made in this place by Dr. Seth Millington, an enterprising practical farmer, but before totally inexperienced in this particular business. A Mr. Atkinson, of Philadelphia, came here last winter with a view of establishing himself in the culture of silk, vases, &c; but not meeting sufficient encouragement, or for some other cause, he did not attempt it, but left with Dr. Millington about 130 eggs for silk worms, which, when hatched, reproduced about 20,000 more; about 1000 of these also hatched and reproduced an incalculable number, say 200,000; and of these also about 300 hatched, which are now fine advanced and eating heartily, and the Doctor has no doubt but fine crops or generations can be produced and perfected in one season.

although this was not favourable, (the weather being cold and changeable for our climate;) yet had he expected these new and multiplied generations, he could have expedited their production and have prepared himself for feeding, &c., which he did not: the first eggs hatched in the spring before he was aware of it or expected them to do so; and they have each time since taken him rather by surprise than otherwise. So that he thinks that with a fair exposure, careful attention, and common seasons, there will be no doubt of this result.

The worms were from twenty-two to twenty-eight days feeding, when they commenced spinning or forming their cocoons. They remained from twelve to sixteen days in them, and deposited all their eggs within three days after they came out millers; and these eggs, or a part of them, hatched from five to ten days afterwards; and if precaution had not have been taken to keep the eggs in a very cool place, the whole severally would have hatched within this time. Doctor M. took one hundred of the smallest cocoons, (understanding the largest were occupied by females, which he wished to preserve,) and gave them to his sister, (Mrs. French,) who, from his imperfect instruction, both being perfect novices in the process, reeled them off in less than one hour, and made twenty skeins of sewing silk of it—the sample enclosed being a part, and all of it of the same quantity and quality.

Doctor M. has procured from Prince's nursery, Flushing, L. I., some of the white mulberry; but they are too small for him to feed his worms wholly upon their leaves this season. But the black mulberry, which is indigenous and plentiful all over our country, supplied their place, and the worms appeared equally as fond of their leaves as of those of the white; but he had not sufficient experience to know if they are as good.

Doctor M. wishes, through the medium of the Farmer, or otherwise, to obtain information from persons more experienced than himself, of the best or proper method of preventing or expediting the hatching of eggs when desirable.

Sincerely, your friend,

STEPHEN HEMPSTEAD, JR.

SILK AND WINE.

[The question is one of primary importance, how far labour and capital may be employed in this country to advantage, in the production of silk and wine.

On all questions that require research, a knowledge of climate, of trade, of the products of foreign countries, of supply, demand, and capacity to produce—in short, an extensive knowledge of facts, and a judicious application of that knowledge to the condition and prospects of our own country, we are accustomed to look with great confidence to the editorial department of the *Massachusetts Agricultural Repository and Journal*. In No. 1, of the 9th vol. of that work, we find the following suggestions:]

THE PRODUCTION OF SILK AND WINE IN THE UNITED STATES.

The following articles* must be interesting to all the citizens of the United States. They propose the introduction of new objects of industry; and although they may not be as successfully cultivated in New England as in the warmer and more favoured climates of the Southern states, yet they cannot fail of being interesting topics to us, as citizens of the United States.

It is indeed a most unexpected view of the case,

[* See American Farmer, vol. 7, p. 329, for the articles alluded to, under the heads of "Domestic Manufacture of Silk and Brandy," and "Memorial to the honourable the President and Members of the Senate of the State of South Carolina."—ED. AM. FARM.]

that our imports of *silk* goods alone should exceed by half a million of dollars all our exports of flour and bread stuffs. We make no apology to our subscribers for copying these articles from the American Farmer. There is no pride so narrow as that which leads the Editors of public journals to prefer in all cases *original* to selected matter. The great object of the public communication and diffusion of knowledge is thus defeated.

The American Farmer, (we say it with deep regret,) is seen by a very small proportion of the farmers of New England. This does not arise from any local prejudices, but from the character and condition of our population. Our farmers are compared with those of the Southern states in narrow circumstances. They are not able to devote either the time or the money which the extensive planters of the south can afford to do, to reading and research. In proportion to their ability our yeomanry do full as much, and feel a zeal quite as strong to cultivate their minds, but they are restricted by their means. It is our duty, therefore, to give the circulation which our journal affords to the information, and valuable suggestions which are found from time to time in the pages of the American Farmer. To this course there is to be sure one objection, which is, that some of our readers here, and all in the Southern states, though they are few, are exposed to the vexatious repetition of the same articles; but this is not an evil to be compared with that of the withholding such articles from our subscribers. Three-fourths of the readers of this journal would never see in any other way what we are about to publish.

We would remark, that we still remain firmly convinced, that it can never be the interest of the farmer of New England to raise the vine, either for the purpose of making wine or for distillation and the manufacturing of brandy. As strong reasons exist against the cultivation of the vine for the purpose of converting its products into brandy, as against raising it for the production of wine.

The great objection to its culture for wine is the deficiency of sugar, or saccharine matter. This defect is so great in our climate, that cultivators are obliged to add a quantity of sugar to the *must*, or expressed juice, to give it sufficient body. And this defect would be still more sensibly felt in converting it into brandy. On the whole, we are persuaded, that we had better exchange our own natural products for the wines and brandies of other countries, and that our labour and capital will be thus more profitably employed.

But the question as to the production of silk is a very different one. We can raise silk, and we can raise it as easily as it can be produced in China or Italy. The white mulberry, the favourite food of the silk worm, thrives in Massachusetts as well as it does in any part of the world. The chrysalis or cocoon can be easily preserved during our winters. It is not a question of doubt; it has been settled by experience. It has been asserted that the inhabitants of Mansfield now raise silk to the amount of \$40,000 a year.

Mr. Clark, of Northampton, thirty years since, raised the silk worm with complete success. Mr. Holcomb, of Sterling, has been equally successful.

The power to produce silk in Massachusetts, therefore, is ascertained; the only question is as to its comparative profit. That one town should be able to raise it to the amount of \$40,000 a year, would seem to go very far towards proving its profitability. The inhabitants of that town can have no fear as to a disclosure of the facts; they can have no reasonable motive for concealing them; they have no monopoly; and an increase of American production of silk would rather aid than injure them by inducing the government to protect and encourage it. It would be desirable that some person who has raised silk extensively, or (if not ex-

tensively,) for some years in succession, should state its comparative profit with that of other objects of labour.

The Massachusetts Agricultural Society will grant a premium for the raising of mulberry trees with the view to the production of silk, and that premium will be announced in their next list.

We shall also, if we have time, insert in this journal full notices as to the best mode of raising the mulberry, and the care and management of the silk worm.

We have never placed the culture of silk among the visionary projects, but have always believed that the United States would raise its own silk at no distant day. It only remains to be seen whether we can raise it to more advantage than to import it, which can never be ascertained before a fair trial shall have been made. Accident, the revocation of the edict of Nantz, first introduced the manufacture of silk into Great Britain, where it has flourished to as great an extent as in Italy. Yet Great Britain imports nearly the whole of the raw material. There is no doubt that we can do better.

ON THE SOPHORIA TINCTORIA, OR WILD INDIGO.

By William Zollkoffler, M. D., corresponding member of the Medico-Botanical Society of London, &c. &c. &c.

J. S. SKINNER, Esq., Westminster, Md., Aug. 8, 1826.

The article which is the subject of the present communication is the *Podalyria Tinctoria* of the distinguished Michaux. It is recognized, by the common and local appellations of wild indigo—indigo weed—broom—horse-fly weed; and, in Doctor Cutler's catalogue, by the name of *Indigofera*. It is an article that belongs to the *materia alimentaria*, as well as to the *materia medica*, in which respect it does not differ from almost every one of our esculent indigenous vegetable productions.

The *Sophoria Tinctoria* ranks in the class *Decandria*, in the order *Monogynia*, and, in the natural orders, or families of *Papilionaceæ* of Linnæus, and *Leguminosæ* of Jussieu.

The *sophoria tinctoria* is little inferior, as an article of vegetable diet, to the *phytolacca decandria*, (commonly called Poke,) which belongs to the class *decandria*, the order *decagynia*, and the natural families of *miscellaneæ*, of Linnæus, and *atrifoliceæ*, of Jussieu.

Delicious, indeed, are the young shoots of this plant, which emanate from the earth's surface, in the spring of the year. It is supposed that they are apt to operate by increasing the frequency of the alvine evacuations, and, that this circumstance should be alleged as an objection to their use. This is, however, an occurrence which is more rare than that which succeeds the use of the *phytolacca decandria*, or poke. The most approved and palatable way of serving up the tender shoots of the *tinctoria*, consists in their being boiled in water for about fifteen minutes, adding to the water, previous to its ebullition, a small portion of table salt; after which, they are to be removed from the vessel in which they have been boiled, when the addition of a suitable portion of butter should be added.

Unfounded is the opinion, which has been advanced, in relation to their being apt to operate on the bowels: for, were we to judge of their subsequent effects in this way, from the general medical operation of the plant, in the advanced state of its maturity, when its virtues become entirely altered, no such conclusion would be drawn with any degree of propriety.

Singular is it, that our native vegetable *esculentia* have not attracted more of the attentive regard and consideration of the lovers of good eating, in conjunction with the cultivators of the articles!

ing to the kitchen garden; for there are many productions of this kind, that are undoubtedly deserving of particular notice, on the account of their not only being delicious, but nutritive.

GENERIC CHARACTER.

Sophoria.—Calix five toothed, gibbous above; corolla papilionaceous, with the wings of the same length with the standard: legume.

SPECIFIC CHARACTER.

Sophoria tinctoria.—Cautis, or stalk, grows to from one to two and a half feet, from which a considerable number of branches emanate. The leaves, which are small, are ternate, inversely heart shaped and sessile. In the month of August, the flowers, which are of a yellowish colour, exhibit themselves on almost every branch. The root, which is irregular shaped, is woody and rough, displaying a brown colour externally. From this numerous small branches proceed.

Various avocations have prevented me from entering into a chemical examination of this plant; and, inasmuch as the result of an investigation of this kind, would not be productive of any thing more than a certain degree of that kind of information which could not afford any light to the horticulturist, in attempting its successful cultivation, I have deemed it unnecessary to defer the communication of its esculent virtues to you on this account.

Fortuitous, not unfrequently, are the circumstances that have given rise to the introduction of many of the articles belonging to the kitchen garden, as well as those which have been introduced into the list of remedial substances; and if every individual who feels interested in the increased accumulation of nutritious vegetables to our present list, would only take the pains to make a few trials of such as may occasionally be stated to them as being alimentary in their nature, we should in a short time have a goodly number added to the present catalogue.

The economical, or domestic uses of the *sophoria tinctoria*, it would be unnecessary to notice, as they have, in some measure, been taken into consideration in a recent number of your very useful and interesting "Farmer."

SILK WORMS.

Mr. Editor,—The culture of the silk worm having lately been agitated to a considerable degree, and being likely soon to become an important branch of industry in this country, I consider it the duty of every one possessing information in any way relating to it, to lay it immediately before the publick. Under this impression, I take the liberty of sending you the following extract from a Philadelphia paper, hoping it may be found useful to those interested in raising the worm.

At the same time I would remark, that at the date of the publication of this extract the culture of silk had become so extensive, that a company was instituted, under the title of "The Filature," which purchased cocoons at from three to five shillings currency per pound. The subsequent troubles with England, in all probability, put a stop to this concern.

—
"Philadelphia, June 9, 1772.

"It may be worth the attention of the raisers of silk worms, that there were two instances in Bucks county last year, where the worms thrived well till after the third moulting, and when they were almost ready to spin, they left off feeding, crawled about, their tails became small and turned yellow, the deadly symptoms among us, and they began to die fast; but, merely by accident in one of the instances, and from design in the other, oak leaves were laid in their

way, which they devoured greedily, gained health and vigour, and spun as well as any worms could do."

[Nat. Gazette.]

RURAL ECONOMY.

RURAL TASTE.

I regard the man who surrounds his dwelling with objects of rural taste, or who even plants a single shade-tree by the road side, as a public benefactor; not merely because he adds something to the general beauty of the country, and to the pleasure of those who travel through it, but because, also, he contributes something to the refinement of the general mind: he improves the taste, especially of his own family and neighbourhood. There is a power in scenes of rural beauty to affect our social and moral feelings. A fondness for these scenes is seldom found with coarseness of sentiment and rudeness of manners. One may judge, with confidence, of the taste and intelligence of a family by the external air of their dwelling. In my excursions in the country, if I pass a habitation, however spacious, standing naked to the sun, with nothing ornamental, nothing inviting around it, I cannot help saying to myself, however abundant may be the slovenly possessions of its owner, there is no refinement in that house; there is no delicate and kindly interchange of sentiment among its inmates, and if ever they are sociable, their sociableness consists in rude and fitful loquacity. Their books are few, and those ill chosen and unread. But if I notice a dwelling, however humble, which is apparently as snug as its owner has means to make it, displaying neatness and taste in its fences, and shades and shrubbery, and flower pots at the window—I feel assured that this is the abode of refinement; this is the home of quiet and rational enjoyment, of intelligence and kindly intercourse.

[Christian Spectator.]

[How many are prevented, by a selfish indolence, from planting either fruit or ornamental trees, because either they are altogether too lazy, or they apprehend that they may not live to enjoy their fruit or to repose under their shade! How contracted are the views of such people. What would be the state of society if all were to act on this principle? Happily there are those who set a better example; those who are willing to sow though they can never live to reap; who continue, to the last, to make plantations of beautiful and valuable trees, for the mere indulgence of a delicate and honourable taste, and for the exclusive benefit of their posterity. On the beautiful farm of a soldier of the Revolution, residing on Sassafra river, in this state, we admired, less than two years past, large plantations of forest trees, which were made after he had passed his sixtieth year. We could mention another gentleman, a merchant of this city, not younger than the farmer to whom we have alluded, who very lately brought from Europe, scions of all the trees he saw there, which were not known in this country; and so skilfully did he manage them that every tree lived except the yew tree. This instance of taste and patriotism, like many of a similar character performed by the officers of our navy within a few years past, reminds us of the just reflections of a prolific and agreeable English author, who observes: "The introduction of a useful or ornamental plant is justly considered as one of the most important services that a person can render his country; for it is impossible to calculate on the benefits that may be derived through his means, when the qualities of the vegetable are ascertained and its virtues known. Even what is introduced and planted merely from curiosity or ornament seems to unite us to the nations from whence it comes. It bestows on us a share of the blessings

of other climates, and affords us a portion of the smiles of a more genial sun. When, therefore, we dwell on the beauty of exotic trees and shrubs, we wish to be understood as expressing our gratitude to those who have enriched our land with additional charms, and more fully displayed Nature to our eyes, and not as disregarding the plants that are indigenous to our soil." To show to those who do every thing for self, how soon they may realize the beauty and the shade of ornamental trees, we will mention, that at Doughoragen Manor, the residence of the venerable Carroll, the most wide spreading, umbrageous, and beautiful willows we ever saw, were planted, not by him, but by his daughter, Mrs. Caton, the assiduous and ever watchful guardian of his health and comfort, and for her sex a model of graceful affability and gentleness. We should suppose that these two trees, planted by her youthful hands, and under which the old patriarch may witness the gambols of his great grand children, now cast a shade of at least one hundred feet in diameter. Yet every day, young house keepers postpone, and altogether neglect planting trees, for fear they may not themselves live to see them grown! We say, again, how short sighted! how selfish! how void of refined taste!]

PRESERVATION OF APPLES.

The following valuable observations, contained in a letter from Noah Webster, Esq. have been published in the Massachusetts' Agricultural Repository.

"It is the practice of some persons to pick apples in October, and first spread them on the floor of an upper room. This practice is said to render apples more durable, by drying them. But I can affirm this to be a mistake. Apples, after remaining so long on the trees as safety from the frost will admit, should be taken directly from the trees to close casks, and kept as dry and as cool as possible. If suffered to lie on the floor for weeks, they wither and lose their flavour, without acquiring any additional durability. The best mode of preserving apples for spring use, I have found to be, the putting them in dry sand as soon as picked. For this purpose I dry sand in the heat of the summer, and late in October put down the apples in layers, with a covering of sand upon each layer. The singular advantages of this mode of treatment are these: 1. The sand keeps the apples from the air, which is essential to their preservation; 2. The sand checks the evaporation of the apples, thus preserving their full flavour—at the same time, any moisture yielded by the apples (and some there will be) is absorbed by the sand, so that the apples are kept dry, and all mustiness is prevented. My pippins in May and June are as fresh as when first picked; even the ends of the stem look as if just separated from the twig."

GOOD CIDER.

Good cider can be made any where, of good fruit, by the following method: When your apples are well ground, wet your straw with the juice instead of water; put some straw in a cask next your receiving tub, with a blanket on it, to filtrate or strain it; then put it into a good clear strong cask immediately; suffer it to have as little air as possible to prevent fermentation. When your cask is full, bung it up tight, and remove it to your cellar, not to be disturbed for one month at least. This cider will retain its sweetness for years, and be as clear as needful; it will be fit for bottling in four weeks. It should not be removed in the cask if was put up in, but racked into another. If there be any who doubt this mode, let them try one cask after the above method. The foregoing is certified from experience.

BENJ. WALDRON.

New York, Sept. 15, 1826.

MILK.

A few weeks since, we noticed the opinion of an English agriculturist with respect to the quantity of milk required for a pound of butter and cheese. A woman in a neighbouring town, who has for many years superintended an extensive dairy, says the Englishman's rule is *exactly right*. She has ascertained by long experience that nine quarts of milk are requisite to produce one pound of butter, and a little more than four quarts for a pound of cheese. A dairy farmer informs us that the skimmed milk and whey of his dairy, employed in feeding hogs, are worth about three dollars a year for each cow. He says skimmed milk given to swine will not yield half a cent per quart, when pork is only five or six cents per pound.

The Encyclopedia says, "the herbage that would be sufficient to add 112 pounds to the weight of an ox, would, if employed in feeding cows, afford 450 gallons of milk." According to this statement one pound of grass fed beef costs the farmer as much as four gallons of milk. This cannot be true in New England. *[Hamp. Gazette.]*

KITCHENS AND LAUNDRIES.

J. S. SKINNER, Esq.,

September 10, 1826.

Sir,—An annual subscriber would be obliged to you or any of your correspondents, for a description of the best mode of *building* kitchens for private families in the country, uniting the advantages of *facility of cooking* and *economy of fuel* with the most convenient and best arranged plans for *bake ovens*, the curing of bacon, &c., as belonging thereto. Doubtless the splendid hotels in Baltimore have establishments of this kind, which would furnish good models for the information herein sought to be obtained. *Rough drawings* should accompany the descriptions.

Also, the best plan of constructing laundries, with a view to economy of fuel, facility of operations, drying linen, &c.

Would it not be useful to the country at large, if you were to publish in your journal, plans for buildings on farms—as houses for negroes, stables, barns, dairies, &c.

Brick is the material contemplated, for the buildings above referred to.

The person making these inquiries, is one who wishes to derive practical benefits from the theories of

RUMFORD.

LADIES' DEPARTMENT.

[For this department we turn again to the little work entitled "HINTS FOR THE IMPROVEMENT OF EARLY EDUCATION AND NURSERY DISCIPLINE—last American from the fifth London edition"]

From the tenor of these hints it is obvious that they are intended chiefly for the use of *Mothers*, on whom we depend much more than is generally apprehended, for our principles, our character and success in life. On this point we cannot do better than give an extract from the preface to the American edition before us:—]

This edition is sent abroad under the deep conviction that families are the first schools in the great discipline of life,—that lessons are to be learnt there which can be learnt no where else,—and that parents, and especially mothers, are incomparably the best and most effective instructors. Children, in the providence of God, are committed to them, at that period of life, when the mind is open to those early impressions which ordinarily sink deepest and last longest, and which, in most cases, constitute the elements of the future character. Mothers, moreover, are naturally the objects of a peculiar preference and

love which give to their counsels and example a most persuasive influence. It is, yet further, their especial duty and privilege to preside habitually over that *home* which is all the world to a child; and they are enabled, in consequence, to watch over that most important, but too often neglected part of education, which is continually going on, and is operating very powerfully in early life, namely—*incidental instruction*—the instruction of current events, and of the circumstances in which we are placed. Let, then, mothers reflect that their responsibility is commensurate with the peculiar opportunities which they enjoy of influencing the minds of their children. All that is sound and useful in the science and art of early education, deserves their peculiar attention.

INDUSTRY, PERSEVERANCE, AND ATTENTION.

As idleness is the inlet to most other evils, so it is by industry that the powers of the mind are turned to good account. That so little is effected by most people, may be attributed much more to the waste and misapplication, than to the want of natural powers; and it will generally be found that usefulness of character depends more upon diligence, than any thing else, if we except religious principle. It is therefore highly important to train up children to habits of industry, application, and perseverance. They should early be made sensible of the infinite value of time; they should be made to understand that no economy is so essential as the economy of time; and that, as by squandering pence, we are very soon deprived of pounds; so, by wasting minutes, we shall lose not only hours, but days and months. They ought not, therefore, to be allowed to remain idle, "because it is not worth while" to undertake any employment; for this is an excuse often brought forward during those intervals of time which occur in the course of almost every day. We mistake, if we suppose that industry is to be confined to lesson hours: children may be as idle when at play, as over their books: we must therefore take care that the time devoted to relaxation be properly and happily employed. The first dawnings of a listless, dissatisfied disposition are to be checked: such a propensity will lead a child to loll in his chair—to stretch on the ground, rather than trouble himself to join in the games of his more active companions: it will lead him to seek for amusement, first, in one thing—then, in another, but to rest content with none. To counteract this tendency, it is necessary to supply children with pleasurable objects—varied, but not too numerous—and to encourage a vigorous and persevering pursuit of them. It is desirable, if in the country, that they should have gardens of their own, tools, a poney, &c.; and we shall find it an important advantage, if we are able to inspire them with a taste for reading as an amusement. This will be promoted by the habit of buying and collecting books for themselves; each child enjoying the privilege of a little library of his own.

One of the duties of a nurse is to employ her charges well in the absence of their parents. If, for example, she provide herself with paper, pencils, paints, little pictures, &c. to cut out and paste, as employment for wet days and winter evenings, many hours may be spent harmoniously and happily, which, in an ill regulated nursery, would pass in idleness, and, consequently, quarrelling and mischief. For children, who are brought up in domestic and natural habits, it will not be difficult to find an abundant variety of wholesome and simple pleasures; and we should carefully avoid exciting a desire for artificial amusements, which, if they produce no other ill consequence, are like all unnecessary stimulants, enervating in their effects, vitiating to the taste, and likely to abate the relish for more common and more valuable enjoyments. Among such objectionable amusements are to be ranked those of

the theatre, cards, and every species of infantine gaming.*

We must endeavour to inspire children with the spirit inculcated in the following precept—"Whatsoever thy hand findeth to do, do it with thy might," (Eccles. ix. 10.)—to bring them gradually "to be a whole man to every thing." This is an acquirement fraught with the most important advantages, though of very difficult attainment. So volatile is the mind during childhood, so averse to restraint, that it is only by very slow degrees the habits, here recommended, can be formed. We must not expect complete success with any children; and, with some, the difficulty will appear nearly insurmountable. Energy of mind, like *power* in mechanism, if once attained, may be directed and applied to a variety of objects; but the want of this energy—an indifference, a spiritlessness of character—is a defect, most difficult to be overcome. Our ordinary resources are apt to fail with minds of this cast; for, with them, the hope of obtaining a desired object; the wish for rewards; the love of reputation, and even a sense of duty, will readily yield to every difficulty, and rarely triumph over that aversion to labour, which, if suffered to prevail, has a tendency to undermine whatever is excellent or valuable. In the treatment of children of this character, a double portion of patience and perseverance is required; and, with all our efforts, we may appear to effect very little; but that little will probably lead to more. We must observe their tastes; and, if possible, excite activity, by presenting them with objects which particularly accord with their inclination. We may sometimes, with those of good dispositions, accomplish our purpose, by engaging their affections, and working upon love more than upon fear. It will also be especially necessary to guard against that deceit, which is too often the consequence of indolence; for a child, habitually indolent, will make it his object to get through every employment, particularly his lessons, with as little trouble to himself as possible; and the consciousness of his deficiencies—the consciousness of having failed in duty, will, almost inevitably, induce him to take refuge in falsehood or mean excuses. We should, therefore, as far as possible, avoid trusting such children to learn their lessons alone; for this will be exposing them to temptation. Let it be an object to give them employments which they cannot evade—from which there are no means of escaping;—something to be *done*, and not merely to be *learnt*. For instance, it will be better to set them so many lines to write, rather than to learn by heart. If tasks must be set, they should be made as short, as defined, as mechanical as possible, and learnt in the presence of the teacher. To all children, perhaps, the rudiments of learning may be made easier, by rendering them as mechanical as the subject admits of. It may be better not to tell a little child that he shall spell his lessons till he does it without a mistake, but to desire him to spell it so many times over, aloud and distinctly, as the business of the day. Children will also learn more readily, when their lessons are regulated by established rules. If a child be uncertain how much he is to read, he will probably murmur when the portion is shewn to him. Rather let it be fixed, that, to read so much, to spell so many words, so many times, &c. is to be the regular business of every day. He will then come with a prepared mind, which is as important to the success and good temper of children as of ourselves. On this account, a daily perseverance in teaching, and regular hours, are necessary. The habit of omitting lessons, on every slight excuse, has an injurious effect; and a child will come very unwillingly to be

* By "infantine gaming," it is intended to include only those games in which children play for money, or which, at least, may lead to their doing so at some future period.

taught, who, from his past experience, daily hopes that he may put off the task, or escape it altogether.

It ought to be our object, that our pupils should advance *surely*, rather than *rapidly*. The most important advantage of lessons,—of regular daily lessons, in childhood, is this:—That they afford us an excellent opportunity of enforcing habits of self-subjection, diligence, and attention, and an opportunity of cultivating a taste for intellectual pursuits. In the first ten years of life, it is not the quantity of knowledge acquired, but the habit of learning well, that is of consequence. With very young children, however, even this principle is to be acted upon with moderation. It is a rule that such a portion should be read, spelt, &c.; and our object is to have this portion done *well*; but we must be prepared for constant fluctuations in our little pupils. The fixed portion of business must, indeed, be done; and if we perceive a spirit of self-will and disobedience, this must be corrected. But that our pupils will be, at one time, more industrious; at another, less so;—at one time vigorous; at another, listless;—at one time, quick; at another, apparently slow and dull—must be expected: it is the nature, the constitution, of children. These changes are to be borne with unruffled patience and quietness, and expressions of displeasure carefully avoided; for it is hurtful, and utterly useless, to upbraid children with dulness and inattention. Let us get through the lesson—get through it as well as we can; and then, if the child display no positive naughtiness, leave it. The fixed portion of business being completed, the child is to be dismissed; and there is little doubt we shall accomplish more at some future period.

But the self-love of parents and teachers is very apt to insinuate itself into this employment. We do not like that other children should read and write better than ours; we are mortified at not gaining the immediate fruit of our labour—that the directions given to day are not practised to-day. Our pupil seldom keeps pace with our impatience; this irritates the temper, and brings down complaints and punishments upon the poor child, for defects which often arise more from a want of power than from a want of will. Thus, so painful an association with his books is excited, as may prove of serious disadvantage to him in after-life. This mistake is generally to be observed in young mothers, and those unaccustomed to the infirmities of childhood. It should be remembered, that the actual result of each individual lesson is of little importance, if no bad habits are formed or wrong tempers excited. It is by a long succession of lessons that progress will be perceived; by line upon line, and precept upon precept. Not that we are to expect that children can be properly taught without discipline, or that the whole of learning can be rendered merely an amusement. Some objects absolutely require labour and self-subjection; but at the same time, we must not doubt that a judicious teacher, with many pupils, can excite a great deal of spirit in learning, and by the variety of instruction on a variety of subjects, can make it interesting and delightful, and thus prevent the fatigue and ennui which so often attend the study of books.

Is it not to this cause that often may be attributed the imperfect and superficial knowledge, the want of literary taste in those who have been taught merely by the common school routine; and is it not desirable that such deficiencies be remedied as far as possible, during the intervals of time passed at home, by directing the attention to English reading; to the study of natural history, and other interesting pursuits? As it is sensible objects which the soonest attract attention in early life, the works of nature may easily be rendered the medium of continual instruction and amusement to children. On this account, natural history, in its various branches, is particularly useful, as both pleasure and improvement may be derived from the habit of observing and examining the various objects with which we are surrounded.

A high standard is desirable in intellectual pursuits, as well as in those of still greater value. Nothing can be less ornamental than accomplishments performed in a poor style, and with bad taste, or than that superficial and imperfect knowledge which

“— is proud that it has learnt so much”

But whilst we endeavour to inspire our children with a desire to do well, whatever they undertake, whilst we endeavour to turn to the best account, both their time and talents, we must beware of raising our expectations too high; for if an ambitious spirit insinuate itself into the business of education, it will be a source of mortification to the parent, and of irritation to the children. It is but too probable that in this case the latter will be over-urged by the former; and thus those very objects frustrated, which have been pursued with too much eagerness.

In cultivating habits of industry, application and perseverance, we are to remember that there is a medium to be observed in this, as in every other branch of education. These qualities are of so much value, that they demand a full share of our attention; but we are not so to pursue them as to infringe upon the necessary liberty, and the truest enjoyment of children. It ought again to be repeated, that *all unnecessary restraint is only so much unnecessary evil*. We must also treat with much tenderness that lassitude and apparent indolence, which even slight indisposition will occasion in children. In the short time devoted to lessons, we may gradually employ a stricter discipline; but, in play-hours, although it is a positive duty strongly to oppose listlessness and indolence, yet, with healthy and well-trained children, we shall find little else necessary than to direct their activity, to encourage their projects, and to add to their pleasures.

MISCELLANEOUS.

CLIMATE, SOIL, PRODUCTIONS, &c., OF ALABAMA.

J. S. SKINNER, Esq. Florence, Ala., Aug. 20, 1826.

Sir,—In reply to your polite appeal for information relative to the agricultural character of our country, I can briefly state, that no portion of the western country presents so inviting a field for varied experiments in practical agriculture as the northern region of Alabama. That particular scope

of country styled the Tennessee Valley, the lower extremity of which I inhabit, is preeminently admired for the remarkably level surface of its lands, their extraordinary fertility, existing in bodies so numerous and extensive as to contain an unusually dense population. Its age considered, it has already made unparalleled advances in wealth and population. The general basis of the county being limestone, it exhibits every variety of soil, equally adapted to the production of cotton, wheat or tobacco, &c., though cotton constitutes the engrossing article of attention. It is in the cultivation of this latter article the southern planter is most interested in eliciting additional knowledge by practical experiments. Our present system of culture is yet admitted to be very defective. The great diversity evinced in the modes of cultivation by different planters, verify the want of that precision and certainty of knowledge that always insures a successful crop to well directed industry. The *drill* system of planting prevails with us, varying the distance from 3½ to 4 feet between drills, and graduating the distance of stalks in the drill from 6 to 8 inches. Upon land of good quality, my own experience induces me to believe that thinning the stalks to the distance of a foot in the drill, is most favourable to a good crop.

But this point is one of the common bones of contention among planters. I believe also a useless waste of ground is sustained by the planter, by allowing more than 3½ feet between drills.

But it is after the plant makes its appearance above ground that the most difficult and critical part of its management commences. I should have observed before, that the seeds are drilled in ridges partially elevated, by three or five furrows thrown together by a bar share plough. The prevalent practice with us is, so soon as the plant exhibits a couple of leaves above ground, to commence scraping down the slopes of the ridges with the hoe, with the view of exposing the tender stalk to the warming influence of the sun. This process is repeated twice or three times before it is deemed necessary to return the dirt, in the form of *hilling*, to the cotton. This practice, though almost universal with the planters, I consider entirely erroneous. The usual period for planting with us, is between the 1st and 15th of April; and in ten days the seeds are seen springing up, exhibiting a very feeble looking plant, very sensible to the effects of cold, and easily blasted by any unpropitious change of weather. The cool weather that prevails in April and the early part of May, never fails to produce an alarming mortality in the cotton. It is at this period the most lively apprehensions are felt by the planter respecting the fate of his crop; the great desideratum being the procurement of a sufficient supply of stalks, standing with due regularity in the drill. This desirable object is, I believe, oftentimes defeated by the injudicious practice of removing the dirt from the plant when young and tender. It being usually close about the stalk of the plant, when it first puts up, protecting its root against the chilling influence of cold air, the practice of scraping down the slopes of the ridges, exposing the stalk to the sun and the chilling air of the nights, contributes powerfully to the blast of the plant. Besides, the surface of the ridges gives the plant a more secure footing, and prevents it from being blown down by the wind.

On the subject of the surface of the ridges, I have observed that the cotton crops are almost invariably more successful when the surface is left as it is, than when it is scraped down. This subject is worthy of more research. I have also observed that the cotton crops are almost invariably more successful when the surface is left as it is, than when it is scraped down.

fortunately exempt from the rot. I am preparing to commence the cultivation of the silk worm. The black mulberry grows abundantly in our woods. I lack eggs. I have written to Mr. John Randal for a supply.

Yours, very respectfully,

JOHN POPE.

OBSTRUCTING THE MAIL.

In the District Court of the United States, held at Williamsburg, (Pennsylvania,) June 5, 1826, before Judge Wilkins

THE UNITED STATES } Indictment for a misdemeanor, in obstructing and retarding the mail stage of the United States, upon the post road from the post office in Pennsborough to the post office in Milton, contrary to the following statute:

The 9th section of the act of Congress of the 3d of March, 1826, provides, that, "if any person shall knowingly and wilfully obstruct or retard the passage of the mail, or any driver or carrier thereof, or of any horse or carriage carrying the same, he shall, upon conviction for every such offence, pay a fine not exceeding one hundred dollars."

The evidence adduced by the United States, proved that, in November last, the mail stage, travelling southward, overtook the defendant driving a wagon and four horses, at the north side of the Muncy Hills, in Lycoming county, which team occupied the middle of the road.

After a little time the stage driver attempted to pass on the right of the wagon, but the defendant then advanced from near the hind wheel of the wagon to his horses, and jerked his lines, inclined his horses across the road, and thus compelled the stage to fall back; the driver and passengers then continued behind, waiting for a much wider part of the road, intending then to run past, previously to entering the narrows of the Hills, where it was impossible to pass without mutual consent; but, when M-Kee reached the wider part, he whipped his horses into a rapid gait, passed up the next short ascent, and thus again obstructed the passage. The driver now gave his reins to one of the gentlemen in the stage, went to M-Kee, and expostulated with him for delaying him, informing him that he would prosecute, unless permitted to pass; but if he now suffered him to proceed, he would forgive him what had passed. M-Kee disregarded the remonstrance, and moved on at his slow pace until the stage driver found a place where he could whip round the wagon, and then he passed it without further molestation.

The defendant's counsel alleged that one of his horses was unruly and frightened; that the obstruction arose from the viciousness of the horse, and offered some evidence of this disposition at a former time and place, but not on the occasion complained of. They endeavoured also, to show that the stage had arrived as early as usual at Milton; and that the delay was not half an hour, as charged in the indictment, but for a few minutes only. And that, in point of law, the indictment was informal and insufficient.

The Judge's charge cannot be given at length, but it was lucid, instructive, and impressive. He represented how important it was to the community, that the mail stage of the United States, transporting so much property, and so much intelligence often of the most sacred nature, should not only pass unmolested, but be held in respect and treated as inviolable. This character it had preserved, heretofore, in the eyes of the citizens, almost universally; producing the happiest consequences to the community, and exciting the admiration of Europeans. This was the first prosecution which had ever fallen under his observation. The question for the jury to decide, if they were satisfied that the

obstruction had occurred, was, whether it was wilful, and did the defendant know it to be the mail stage? The indictment held to be sufficient, and therefore overruled the objection to it of the defendant's counsel. If the delay was intentional, and with knowledge, its short duration, and the early arrival of the mail at Milton, were no excuse. The jury, in about fifteen minutes, agreed upon a verdict of guilty.

DREADFUL DEATH.

A farmer of Thoarout, in Flanders, was following a swarm of bees in the heat of the day; at length seeing the bees banging on the branch of an ash, he presented the hive to them, but unfortunately the queen betook her station on his face, and in a moment the whole of the bees followed their sovereign, and the unfortunate man was overwhelmed by this cruel species of attack. In a quarter of an hour he was dead. A person who was with him, to assist him in the operation, ran away from him.

A credulous clown went to the clergyman of his parish, and told him with great symptoms of consternation, that he had seen a ghost. "Where did you see it?" was the question. "Why," said Digory, "as I were going, 'an please your reverence, by the church, right up against the wall, I sees the ghost." "In what shape did it appear?" "For all the world like a great ass." "Go home and hold your tongue," said the clergyman, "for you are a very timid creature, and have only been frightened by your own shadow."

SPORTING OLIO.



RICHMOND JOCKEY CLUB RACES.

The Richmond Jockey Club Races will take place on the third Wednesday in October, (the 18th,) and continue four days.

On the first day, the Proprietors' Purse for \$300, two mile heats. On the second, the Jockey Club Purse for \$1000, four mile heats. On the third, the Post stake of \$500, a single four mile heat. And on the last day, a Handicap, and match race for \$400 will be run for.

Among the horses now in training, are Arab, Ariel, Gohanna, Shakspeare, Phillis, and others.

NEW YORK ROAD HORSE RACES.

The New York "Association for the Improvement of the breed of Road Horses," give notice that their fall purses will be contended for on the 2d and 3d day of October next.

First day's purse, under the saddle, 2 miles and repeat, \$200. Second day's purse, in harness, 2 miles and repeat, \$200. The weight under the saddle, 145 lbs.; in harness, to carry a feather.

At 4 o'clock on the second day, there will be a sweepstakes of \$100, three miles and repeat, under the saddle, free for rackers, pacers and trotters. Riders to be dressed in coursing style.

THE HORSE.

(From the Sportsman's Repository.)

Of all brute animals in a state of association with the human race, the Horse occupies the first and most important rank. He forms an indispensable link in the chain of creation: without him, nature's system and human enjoyments had been incomplete. He contributes equally to the services,

luxuries, and pleasures of man. Whether it be laboriously to till the soil, as an associate with the patient ox, to carry the heaviest burdens, or to perform the longest and most painful journeys, the horse is the ready and obedient slave of his master. Nature has endowed this her favourite animal with a degree of intelligence and a generous inclination to obedience, which render him highly susceptible of education. His form and qualities are admirably adapted by the Eternal and unerring Artist, to the particular rank he is intended to fill in the scale of being. He is either fashioned to sustain heavy burdens, and to endure the coarsest drudgery, or endued with that just and beautiful symmetry of form and delicacy of skin, which convey to the critical and scientific view, ideas of perfection, and which are harbingers of the highest degree of quadrupedal activity and speed. His full eye beams with mildness and generosity, or sparkles with the fire of courage, energy and action. In war, he offers a dauntless front to the greatest dangers, engaging in the mortal strife and clangor of battle, unappalled, and as actuated by an undivided and equal interest with his rider. In the field, and on the course, he exhibits a speed, and power of continuance, a firmness of nerve, a strength of muscle and elasticity of sinew, of which no other animal of the creation is capable; bearing his rider along over plains, hills, and vallies, as if impelled by supernatural energy: but all descriptions of the horse must give place to that inspired one of Job, which has elevated and delighted the minds of men of all ages and all nations.

Job was a native of those deserts, to which is indigenous that fine and delicate model of the horse genus, from his superior speed, styled the *Courser*. These beautiful animals are supposed to have originated in the deserts of Arabia, of Barbary, and some other parts of Africa, and from those to have migrated to the circumjacent countries. Granting this to be supposition, it is confirmed by an unbroken evidence of facts during thousands of years, recourse being invariably had to those deserts for supplies of this matchless race: but there exists no record of sufficient antiquity to reach the first example of taming the horse, since the most ancient histories represent him as already inured to the service of man.

In order to have a clear understanding of the nature of this interesting animal, it may be convenient to divide the genus (*equus caballus*.) into two original species, the most opposite indeed to each other, both in form and qualities,—namely, the Southern and the Northern: the fine courser of the Eastern deserts, and the gross, coarse, and bulky horse of the lowlands of Europe. The former appears as he came perfect from the hand of nature, independent of the art of man; and his activity and high spirit plainly destine him to the saddle, although in his native regions, where the camel and the dromedary submit to the heavy burdens, he has also been immemorially harnessed to the war chariot. The latter, a European species, some of which are almost of elephantine size and weight, calculated chiefly for slow draught, are covered with coarse hair and hides, have large, round, and porous bones, and rugged indolent sinews. These, although large and stately animals, are seldom found of regular proportions, until improved by human art. These species in contrast are cited as an appeal to the consideration of those, who conjecture with Buffon, that all horses have proceeded originally from one single pair, and that the specific differences and varieties which we witness, are the mere result of difference in soil and climate. It seems scarcely possible that two species so opposite and distinct, as well in external form and size, as internal quality, should mutually and interchange-

ably assimilate through any other medium than that of intercopulation. The wild horses of South America, even upon the most arid and lesart tracks, give thus far, no countenance to the hypothesis of Buffon, retaining their original specific distinctions of form, after the lapse of several centuries. These arguments, however, do not militate against the Count's position, that the light and elegant courser is the natural production of dry soils and warm climates, provident nature having originally furnished the various soils and climates of the earth with animals, in size, form, and constitution, suitable thereto. The horse, under the fostering care of man, will succeed and prosper under all, but the extreme degrees of climate; the species of the genus are numerous, and the varieties almost infinite.

From the deserts, then, the nations of antiquity were supplied with a breeding stock of the most valuable species of the horse; and Egypt, Persia, Numidia, Macedonia, and Greece, are chronicled as famous for the number and excellence of their cavalry; the latter country, in the Olympic games, being the first to use the horse as a *courser*, and to train him to the race. The vast regions of Tartary have always possessed a light, sinewy, and blood-like description of this animal; and those parts of Europe, bordering upon the Eastern countries, have been constantly receiving improvements in their indigenous breed, from that source. The various communications also, ancient or modern, between the Eastern countries and Europe, whether of war or commerce, have served to stock our northern part of the world with the horses of the East, by which our native breeds have been so changed and improved; but in Britain and Ireland alone has the southern species been preserved in a separate state and purity of blood. The crusades, no doubt, were the occasion of importing a great number of horses from the Levant into Europe.

LEAPING.—On Saturday morning, May 27, an extraordinary leaping match was decided at Tooting. One hundred guineas were betted that an Irish gentleman would beat three other gentlemen, two of whom were Englishmen, and one a Scotchman, at leaping on level ground. The Scotchman, in a running leap, cleared eighteen feet, but could go no further; the Englishmen could neither of them exceed seventeen feet and a half, but Paddy, in his first spring, leaped nineteen feet seven inches. In the hop, step, and jump, the Irishman leaped the extraordinary distance of forty-seven feet, by which he beat his antagonists between eight and nine feet.

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER 29, 1826.

SPORTS OF THE TURF.—Gentlemen who patronize and take pleasure in this sort of amusement, assure us that fine sport may be expected at the next races, to commence on the Canton Course on Wednesday, the 18th of October.

Amongst other horses in training for the purses to be run for on that day, the following have been mentioned to us:

Betsey Richards,
Mark Time,
Fairfax,
Tickler,
Lady Hal,
Trippet,
Southern Eclipse,
Louisa Sims,
Oscar,—sold from the training stable to a gentleman in Ohio for \$600.
Two 3 year old Tuckahoe colts.
Warwick mare,
Otterington,

OHIO TOBACCO.—About two thousand three hundred hogsheads of Ohio tobacco of the last year's crop, have been inspected at the warehouses in this city. We understand that it has generally been very handsomely handled and packed, and has come to market in good order—a little of it in too high condition. It has brought, generally, we believe, from seven to ten dollars per hundred, and is the only tobacco in which much is doing. There is said to be a difference in the texture and quality of the Ohio and Maryland, in favour of the latter, when there has been no advantage in colour. The Ohio bright tobacco is said to be *fatter*—to use a term understood by tobaccoists and tobacco dealers.

VERY LATE FROM ENGLAND.—By the packet ships Florida, Captain Tinkham; and Leeds, Capt. Stoddard, the former of which sailed from Liverpool on the 20th, and the latter on the 25th ult., we learn that an important Order in Council was adopted on the 28th July, (but was not published until the 18th of August,) which, among other provisions, goes to prohibit our direct intercourse with the British possessions in the West Indies, &c., after the *first day of December next*.

In Ireland, a wide spread sickness, said to have been caused by hunger, has filled the hospitals with patients.

At Lancaster Assizes, 42 persons convicted of being engaged in the late riots, have been sentenced to death.

The subject of most interest on the Continent, was the new Portuguese Constitution, which appears to have alarmed all the members of the Holy Alliance. [N. Y. Mer. Adv.]

Letters received in Baltimore by these arrivals from Europe, state that there is *nothing doing in tobacco*.

COMMERCIAL RECORD.

The London Price Current of August 22d, says: Wheat is a fine crop, Barley middling, Oats very short, Beans and Peas a complete failure. It is therefore anticipated that the Ministers will immediately issue an order in council permitting the importation of 500,000 quarters foreign corn, as authorized. This would give a great impulse to the trade of the country.

The corn crops on the continent are said to be most abundant.

Liverpool, August 25.—There has been a good demand for Cotton the last five days, which holders have met freely at last week's prices. The sales are estimated at 9500 bags of all sorts; about 2000 of Egyptian at 6½ a 6¼, mostly taken by speculators. The market the last two days has been rather heavy. There is a good demand for U. S. Pot ashes at 24s. and Pearls at 25s. 6d.; 25s. asked for recent imports of Pots from Montreal. On the 23d, 2300 bbls. of new Turpentine were sold by auction at 9s. to 9s. 6d. [N. Y. Mer. Adv.]

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	5	8	9	12
BEES-WAX, Am. yellow	—	30	31		50
COFFEE, Java,	—	16½	17½	20	22
Havana,	—	15	16½		20
COTTON, Louisiana, &c.	—	11	13		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½	14	16	18
Dipt,	—	11			14
CHEESE,	—	8½	9½	12	15
FEATHERS, Live, . . .	—	30		37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	5 50	6 00		
FLAXSEED, Rough, . .	bush	75	80		
FLOUR, Superfine, city,	bbl.	4 50		5 25	6 00
Fine,	—	4 25			
Susquehanna, superfi.	—	4 00			
GUNPOWDER, Balti. .	25 lb.	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	60			
white	—	65	68		
Wheat, Family Flour, .	—	80	i 00		
do. Lawler, & Red, new	—	78	83		
do. Red, Susque. . .	—	80	85		
Rye,	—	55	60		
Barley,	—	80	1 00		
Clover Seed, Red . . .	bush	4 50		5 00	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed, .	bush	3 00		3 50	scw/ce
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	4 00		4 50	
Oats,	—	46			
Beans, White,	—	1 50	1 70	1 87	
HEMP, Russia, clean, .	ton	215			
Do. Country	—	120	130		
HOPS, 1st sort,	lb.	12		25	
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	7			
Bar	—	7½	8		
LEATHER, Soal, best,	—	22	23	32	
MOLASSES, sugar-house	gal.	46	50	62½	75
Havana, 1st qual. . .	—	30		37½	
NAILS, 6x20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . . .	—	1 75			
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter . .	—	68	70	88	
PORK, Baltimore Mess, .	bbl.	11 00	11 50		
do. Prime,	—	8 50			
PLASTER, cargo price,	ton.	3 90			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, . .	—	5½	7½	10	12
WHISKEY, 1st proof, . .	gal.	32	33	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	33		50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	9 50	10 00		
Louisiana,	—	8 75	9 75	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves,	—	70		1 00	
Ginger, Ground,	—	7	12	12	18
Pepper,	—	16½		25	
SALT, St. Ubes,	bush	43		75	
Liverpool ground . . .	—	46	47	78	
SHOT, Balt. all sizes, .	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Claret,	doz.	4	8	5 00	8 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinnors' or Pulled, . .	—	20	25		

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AGRICULTURE.

MARYLAND AGRICULTURAL SOCIETY.

Next Cattle Show.

At a meeting of the BOARD OF TRUSTEES of the Maryland Agricultural Society at Brookland Wood, on Thursday 28th September, 1826, the following members appeared: R. Caton, J. B. Morris, G. Cook, A. Thomas, J. Hollingsworth, J. Swann, B. W. Hall, S. W. Smith, D. Williamson, jr. James Cox, Treasurer, and J. S. Ginner, Corresponding Secretary.

The committee appointed at a former meeting to prepare a scheme of Premiums for the consideration of the Board, made a report, which, being read, it was resolved that said report be published in the American Farmer as a project for consideration, with an invitation on the part of the Board, to the agriculturists of the state, soliciting such suggestions in regard to any practical modification of said report, as may be thought expedient and useful: said suggestions to be made through the corresponding secretary, and to be by him submitted to the Board for consideration at their next meeting.

The Board then adjourned to hold their next session at Lexington, the residence of David Williamson, jr. Esq., of which further notice will be given.

The following is the Report as presented by the Committee.

The Committee appointed to prepare a scheme of Premiums for the next exhibition of the Maryland Agricultural Society, beg leave to report the following, viz:

FARMS.

- For the Farm of not less than 100 acres, which shall appear to have been cultivated, with the greatest economy and nett profit, consistently with its permanent improvement; reference being had to its natural advantages as to soil, situation, &c., . . . \$50 00
- For the second best Farm; particulars as above, . . . 30 00

CROPS.

- For the best 10 contiguous acres of Wheat, to be not less than 30 bushels per acre, . . . 20 00
- For the best 10 contiguous acres of Indian Corn, yield not less than 60 bushels per acre, . . . 15 00
- For the best 10 contiguous acres of Rye, yield not less than 30 bushels per acre, . . . 12 00
- For the best 5 contiguous acres of Hay, timothy, clover, rye or orchard grass, or any of the above mixed—weight to be ascertained at least one month after cutting, . . . 15 00
- For the best 5 contiguous acres of wheat, yield not less than 30 bushels per acre, . . . 12 00
- For the best 5 contiguous acres of Indian Corn, yield not less than 60 bushels per acre, . . . 10 00
- For the best 5 contiguous acres of Rye, yield not less than 30 bushels per acre, . . . 10 00
- For the best 2 contiguous acres of Hay as above, . . . 10 00
- For the best crop of Tobacco, not less than 5 hogsheds, highest price, . . . 20 00
- For the second best crop of Tobacco, as above, . . . 10 00
- To the person who shall raise the greatest quantity of Seed Cotton in this state, . . . 10 00
- For the best acre of Potatoes, not less than 200 bushels, . . . 10 00
- To the proprietor of the apple orchard, consisting of not less than 200 trees, which shall evince the most judicious management, . . . 10 00

For the most successful experiment in water-wrapping, or otherwise preparing Flax or Hemp; the quantity to be not less than 50 lbs. dressed—the whole process to be stated and a sample to be produced, . . . 10 00

HORSES AND MARES.

- For the best thorough bred Stallion, pedigree properly authenticated to be produced, and left with the Society for publication, . . . 20 00
- For the best Stallion adapted to get stock for the saddle, . . . 15 00
- For the best Stallion adapted to get stock for quick draft, . . . 15 00
- For the best Stallion adapted to get stock for slow draft, . . . 15 00
- For the best thorough bred brood mare, . . . 20 00
- For the best brood mare adapted to the saddle, . . . 10 00
- For the best brood mare adapted to quick draft, . . . 10 00
- For the best brood mare adapted to slow draft, . . . 10 00

ASSES AND MULES.

- For the best Jack, . . . 20 00
- For the best Jennet, . . . 10 00
- For the best pair of well broke Mules, raised in the state, . . . 15 00
- For the best Mule Colt, by the side of its dam, . . . 5 00

NEAT CATTLE.

- For the best Bull over 2 years old, full blood Improved Durham Short Horns, . . . 15 00
- For the best Bull over 2 years old, full blood Devon, . . . 15 00
- For the best Bull over 2 years old, of any other breed, . . . 15 00
- For the best Bull under 2 years old, of any breed, . . . 10 00
- For the best milch Cow, . . . 20 00
- For the second best ditto, . . . 15 00
- For the third best ditto, . . . 10 00
- For the best Heifer of any breed, . . . 15 00
- For the second best ditto, . . . 10 00
- For the best pair of well broke Oxen, . . . 10 00
- For the best grass fed Bullock, . . . 20 00

SWINE.

- For the best Boar over 1 year of age, . . . 10 00
- For the best Boar under 1 year of age, . . . 5 00
- For the best breeding Sow, . . . 10 00
- For the best Sow Pig, . . . 5 00

SHEEP AND WOOL.

- For the best Saxony Ram, reference being had to the quality of the wool, . . . 15 00
- For the best pair of Saxony ewes as above, . . . 10 00
- For the best Merino Ram, as above, . . . 15 00
- For the best pair of Merino Ewes, as above, . . . 10 00
- For the best Southdown Ram, . . . 15 00
- For the best pair of Southdown Ewes, . . . 10 00
- For the best Dishley Ram, . . . 15 00
- For the best pair of Dishley Ewes, . . . 10 00
- For the best Ram, of any other breed than the foregoing, . . . 15 00
- For the best pair of Ewes, of any other breed than the foregoing, . . . 10 00
- To the Farmer whose flock at the last shearing yielded the greatest average weight of Wool, the flock to consist of not less than 20; the wool of the whole to be weighed, being first cleansed of tags and filth—if fine wool, . . . 10 00
- As above—coarse wool, . . . 5 00
- To the Farmer who shall have raised, the last season previous to the exhibition, the greatest number of Lambs, in proportion to the number of ewes, (not less than 20,) . . . 10 00

For the best specimen of shearing, (on the ground,) . . . 5 00

DOMESTIC MANUFACTURES.

- For the best piece of Carpeting, not less than 20 yards, the wool whereof to be raised and spun on the farm of the candidate, . . . 8 00
- For the best piece of Kersey, adapted to labourers, not less than 20 yards as before, . . . 5 00
- For the best piece of shirting of any materials, not less than 20 yards, . . . 5 00
- For the best piece 8-4 linen Diaper, not less than 15 yards, . . . 5 00
- For the best hearth Rug, . . . 4 00
- For the second best hearth Rug, . . . 3 00
- For the best and handsomest piece 10-4 wool-len Counterpanes, . . . 4 00
- For the second best, do. do. . . 3 00
- For the best pair knit woollen Hose, full size, . . . 2 00
- For the second best do. do. . . 1 00
- For the best pair cotton Hose, full size, . . . 2 00
- For the second best do. do. . . 1 00
- For the best pair knit thread Hose, full size, . . . 2 00
- For the second best do. do. . . 1 00
- To the Spinners of the greatest weight of cotton, wool, or flax, in five hours; for each article \$3, . . . 9 00

IMPLEMENTS OF HUSBANDRY.

- For the best agricultural Machine, that may be considered new and as deserving the patronage of the Society, . . . 10 00

FERMENTED LIQUORS.

- For the sample of the best Cider, the pure juice of the apple, . . . 10 00
- For the sample of the best domestic Wine, . . . 10 00

BUTTER AND CHEESE.

- For the specimen of the best fresh Butter, . . . 10 00
- For the specimen of the best preserved Butter, 3 months old, . . . 8 00
- For the specimen of the best Cheese, made in Maryland, . . . 8 00

PLOWING.

- For the best Ploughing by three horses or mules, . . . 10 00
- For the best Ploughing by two horses, mules, or oxen, . . . 10 00
- To each of the successful Ploughmen \$2, . . . 4 00

[On the above scheme of Premiums, we take leave to make a few comments, explanatory in some measure, of the views of the Committee and the Board of Trustees, and in pursuance of our own reflections. For these neither the Committee nor the Board will be answerable, as they are made without their authority. We act rather as *Amicus Curie* than as an officer of the court.

First as to *Farms*. It will be seen that no change has been made, the Board is of opinion that these Premiums ought not to fail in exciting a salutary spirit of emulation for best general management, and that if the terms be strictly complied with and the vouchers regular and satisfactory, the information to be gained by the publick will be important. As these Premiums are of high value, and funds not easily raised, a strict compliance with the terms and an intelligible description of the management, for which such a distinguished premium is conferred, ought to be exacted of the party.

CROPS.—The Premiums for these are generally of the same amount and for the same species of crops as those heretofore given; but it will be seen that the number of acres have been in most cases diminished by one half. This was done, it may be supposed, with a view to opening the field for a greater number of competitors, and to inculcate the expediency of making heavy crops on little land, rather than light ones on a large surface. The cost of labour in each case per acre being nearly the same; the true secret of one of the chief sources of

the greater profit of agricultural capital in New England over Maryland, where slaves have eaten up their owners, driven away their children, and are now eating up themselves.

HORSES.—Here new premiums have been introduced for the express purpose of encouraging in the mode deemed most effectual, within the means of the Society, for the encouragement of the race of the blooded horse in Maryland, besides the Premiums heretofore offered for the best horses, have been increased in amount. The Board of Trustees has probably been struck with the remarkable and disparaging fact, that there is scarcely an estate in Maryland on which there can be purchased, what may be called a valuable saddle or harness horse, of good figure and action, such as a gentleman would take pride in owning. It is admitted with pleasure that improvement is going on in this particular, and if any one can suggest in what way the funds of the Society can be so appropriated as to accelerate an object, with which the pleasure and the convenience of so many are connected, such suggestions will be most respectfully considered.

ASSES AND MULES.—There is now little if any dispute about the economy and value of the mule; on these points, as well as on the various races of the animal from which they are on one side derived, nothing remains to be said, since the publick was favoured with the excellent and conclusive prize essay of Mr. Pomeroy; yet it is wonderful what apathy is evinced on the point of procuring and encouraging the best jacks to be used within the state. One would really suppose the publick to be actuated towards these enduring and faithful domestics by a prejudice similar to that which realizes the prophetic denunciation against the serpent, "and the heel of the sons of Adam shall bruise the serpent's head." There are perhaps not thirty mules reared in Maryland in a year.

NEAT CATTLE.—The Premiums for these have been augmented in consideration of the universal use and value of Cattle, and the importance of promoting their improvement, seeing that there is so much difference in favour of particular races. Some being best fitted for beef, some for milk, some for butter, some for the yoke, and some uniting most of these qualities with the least number of defects. We hope never again to see the Cattle-pens so bare as they were at the last Cattle Show.

SHEEP.—No alteration has been made in the scale of premiums for Sheep. All the valuable races are embraced, and it has been deemed useful to offer such inducement as will ensure to the patrons of the Society, and the agricultural publick, an opportunity of seeing the various breeds. The Southdown breed, so remarkable for its hardiness, the good quality of its wool and the excellence of its mutton, has been imported by Col. Powel, in considerable numbers and in great perfection—we shall soon have an opportunity of realizing the merits of a race of sheep so long esteemed in England for hardiness, and for yielding a better quality of mutton than any other.

DOMESTIC FOWLS.—The premiums for these have been augmented in consideration of the universal use and value of Cattle, and the importance of promoting their improvement, seeing that there is so much difference in favour of particular races. Some being best fitted for beef, some for milk, some for butter, some for the yoke, and some uniting most of these qualities with the least number of defects. We hope never again to see the Cattle-pens so bare as they were at the last Cattle Show.

general premium for the machine which shall "be considered *new and as deserving* the patronage of the Society."

FERMENTED LIQUORS, BUTTER, AND PLOUGHING, no change has been made.

GENERAL REMARKS.—We apprehend, that on a view, of the list it must be admitted as apparent that the Board of Trustees have kept in view, improvement in the substantial practical branches of agriculture. If in some things they may be thought to have erred they would only answer, "*humanum est errare*," but they court advice and are open to conviction.]

HINTS TO FARMERS.

[In a late number of Bell's Weekly Messenger, received at this office, we find the following hints from Sir John Sinclair, and, as they have grown out of the "uncommon heat and dryness of the season," many of his suggestions may be applicable to our own country. On the point of increasing *litter*, as a means to supply the deficiency of manure next year, arising from the scarcity of the materials commonly used for that purpose, it has occurred to us that our farmers would be well repaid for their labour by cutting the immense crops of the *hog weed*, and other weeds which, as far as we have made excursions in the country, appear to be more abundant this year than we have ever known them—we have seen some fields which we should suppose would yield two or three tons weight to the acre. It is said that cattle will eat the *hog weed* kindly in winter, if well cured; but, at all events, it would make good bedding and litter for barn yards.—There is another point touched by Sir John Sinclair that deserves the most serious attention—that is the importance of every farmer making himself acquainted with, and putting into practice, the *means of irrigation*. Wherever a stream of water can be brought to act upon any portion of his land, no pains should be spared to put it in operation; more especially since we have now for so many years experienced the *scarcity of the water* in the best dry-land meadows to fail from the drought. Of all manures *water* is one of the most efficient, and when arrangements are once made to avail ourselves of its agency, it continues to be, of all manures, the cheapest, not only because it is the free offering of bountiful nature, but because it costs less labour to apply it. We do not here allude altogether to the advantages of irrigation in the summer season; for we are aware that the very droughts which so much enhance the value of *that*, will often exhaust the streams which are to afford the means of it,—but we mean to urge upon the farmer that he should keep in mind the undeniable fertility caused by winter flooding of his land where that may be, as it can be accomplished in so many situations where it is totally neglected. On these topics, *IRRIGATION* and *FLOODING* of land, we have given, it is apprehended, ample testimony of their advantages and instructions as to the means of conducting these operations. Is further information needed by any on this or other subjects embraced in this journal? the party is respectfully reminded of what we have often suggested—To wit: that the better way is to reduce his wishes to the form of plain queries on each separate point, and if our correspondents do not, as they generally and liberally do, supply the information from their own knowledge or experience, if we do not answer ourselves, it will be because we cannot command the information from our own resources. The trial is always easily made; the paper is open, and the wisest men will proclaim their own ignorance, and thus admit their ignorance, and thus improve their knowledge.]

to repent it: and all those within reach of a hay market should save every particle of winter food that may enable them to reserve their hay for sale. That article is now selling for \$22 per ton.]

The following article is given as "*Hints to Farmers, on the means of alleviating the mischiefs which are likely to result from the unfavourable season.*"—By the Right Hon. Sir John Sinclair, Bart.—[It is dated, Edinburgh, July 20, and addressed to the editor of the *Courier*, with the following short introduction:—"It is of the utmost consequence that the farmers should receive, with as little delay as possible, the inclosed hints on the means of alleviating the calamities they are likely to suffer from this most unfavorable season. I wish much, therefore, to have the inclosed inserted," &c. The document is subjoined:

It is evident that husbandmen, in many parts of the kingdom, are likely to suffer severely from the uncommon heat and dryness of the season. The scarcity of grass, the diminished quantity of hay, the failure in the crop of turnips, and the certain deficiencies of straw, must in various ways be highly injurious to the farmer, in proportion as he experiences these calamities. The number of his cattle and his horses must be reduced, and even then they will be ill-fed; while, from a want of litter, the quantity of manure for the grain and green crops of the succeeding year must be greatly diminished.

It is a duty incumbent upon those who have directed their attention to agriculture, to furnish such hints as may tend to alleviate the mischiefs which are to be apprehended from the joint operation of so many unfortunate circumstances.

1. **REAPING THE CROP.**—In many fields of oats and barley, the straw is so short that it will be impossible to reap the crop with a hook or sickle. In such cases, short scythes may be used with advantage. But, in whatever way the harvesting is carried on, the greatest care ought to be taken, either to cut the crop close to the ground or to collect the stubble for litter.

2. **ON STRAW-HAY.**—The second crop of clover this year, if the season be favourable, may still be productive; but when there is much wet, the second growth is often lost. The only mode of preservation is, by mixing it with layers of straw, more especially with oat-straw, if it can be procured. The clover, when mixed with the straw, may be full of sap; but it ought to be free from rain moisture, otherwise it may become mouldy. The clover is thus secured, and the straw so much improved in value, that 5s. worth of straw may be thus converted into an article worth 30s. or even more.

3. **SALTING STRAW-HAY.**—If the straw-hay is salted at the time of stacking, cattle will not only eat the mixture more eagerly than good unmixed hay not salted, but will thrive nearly as well upon it.—The quantity recommended is, either one hundred weight of salt to seven or eight tons of hay, or a peck of ground rock salt, if pure, to a ton of hay. But as rock salt is often mixed with sand or other manufactured salt is preferable.

4. **LITTER.**—A great diminution of dung, from the want of straw for litter, will be severely felt in the succeeding crops; this deficiency ought to be supplied by every possible means, as by collecting weeds, the leaves of trees, fern and heath, or employing peat mould for the purpose.

5. **FERTILIZING.**—The deficiency of stock manure, in some parts of England, is so great, that it is necessary to have recourse to other means. In some parts of England, the crop is reaped, the land should be lighted, and the straw and chaff be used for litter.

broad-cast. They never grow large; but in Flanders, they are greedily consumed by cattle; and it is there remarked, that when given to milch cows, they are not apt to give any taste to the milk or butter. They are sometimes suffered to shoot; and the cattle devour them in that state, till the middle of April. Some would prefer folding sheep on the crop; and when given to cattle, they ought to be cut, to prevent any risk of choking the stock fed upon them, which sometimes happens when turnips are small sized.

If the crop of turnips has failed, the farmer is earnestly requested, after harrowing the surface, and clearing it of weeds, to sow the field with rape. If this is done in the end of July, or first week of August, the produce will be very great. The crop answers well for sheep folded, and may be mown and given to cattle, and even horses. The quantity of seed required, when sown broad-cast, is about 8 lbs. per English, or 10 lbs. per Scotch acre, at 6d. per pound. The earlier it is sown, the better and fuller produce may be expected.

Where furze or whins abound, they may furnish a great and valuable supply, which might perhaps be improved, by having salt mixed with them. Large farmers should erect mills for bruising them, but small ones must employ the flail or mallet.

Heath-hay, or the shoots of young heath growing more or less intermixed with ordinary herbage, may be mown and easily dried for winter use. This is done in Strathdon, in Aberdeenshire and in the more hilly parts of Wigtownshire, and is found to be of more value than many are aware of who have not tried it.

Linseed and oil-cake may be procured, either from the continent or from North America; and if low priced may be a great resource to the farmer.

So great is the probable scarcity of hay, that a spirited farmer in Scotland proposes to import that article from Holland. What an argument this is in favour of irrigation, which would ensure a produce of hay in almost any season.

Notwithstanding all these aids there is likely to be a deficiency of manure for the crops of next year. Most fortunately the application of oil, as a means of enriching the soil, has been recently pointed out; and, so far as that article can be procured, there is reason to hope that the deficiency may be supplied. Proofs of the efficiency of this manure shall, as soon as possible, be submitted to the attention of the farmer.

Another species of manure, which is but little attended to in this country, is kelp, or the ashes of sea weeds. This dressing is peculiarly calculated for stiff soils. It is found in the Isle of Jersey, that half a bushel of pounded kelp, if sown on a stiff soil in the winter season, or beginning of spring, will manure a perch or pole of land; consequently 20 bushels an acre. It is said that it gives a full ear to corn, and prevents its being laid.*

The resource of fish as a manure has not been sufficiently attended to. In the rivers which run through the fens of Lincolnshire, Cambridgeshire and Norfolk, the small fish called stickle backs swarm in such abundance, as to be purchased at from 6d. to 1s. per bushel, and are successfully employed in forming composts. The refuse of the pilchard fishery in Cornwall ensures great crops. There is an immense herring fishery on the coast of Caithness, which produces much refuse or garbage, in the proportion of one barrel of refuse to fourteen barrels of herrings. But it requires the garbage of 84 barrels of herrings to manure a Scotch, or about 67 barrels an English acre. The effects of this manure, however, on waste lands, when first brought into cultivation, are hardly to be credited. It is calculated, that a ton of fish, moderately salted, in a compost

with soil, would manure five English acres. It would be desirable to ascertain what would be the expense, and in what manner this manure could be most profitably applied.

I earnestly hope that other friends to agriculture will lend their aid to improve these hasty suggestions, and, by our united efforts, that we shall still be enabled to surmount the difficulties which we are likely to encounter.

JOHN SINCLAIR.

133 George-st. Edinburgh, July 15, 1826.

HORTICULTURE.

PRINCE'S BOTANIC GARDEN.

J. S. SKINNER, Esq.

September 25, 1826.

Sir,—In one of your late papers, you have noticed the arrival at the celebrated garden of Wm. Prince, Esq., on Long Island, State of New York, of the bust of Linnæus, the father of systematic botany. I have been highly gratified by the information; for I do not know of any situation where this bust could with more propriety be placed. Considering the age of our country, and his limited resources, there is not a man living who has done as much to improve the botany of the United States as Mr. Prince; and this too without any public aid, wholly relying upon the taste, patriotism, liberality, and enterprise of his countrymen, to remunerate him for the expense which he annually incurs by importation from the various gardens of Europe, Asia, and Africa, and for his constant and heavy expenditure for attending to and cultivating a garden containing thirty-two acres closely filled, and in which he has frequently employed from thirty to thirty-six hands, gardeners and labourers. Our travellers from the south and the north, from the east and the west, who visit New York, the emporium of American commerce, spend thousands of dollars, less to their own satisfaction and public benefit, than would be derived from a visit to the garden of Mr. William Prince. There uninfluenced by names, they would examine for themselves, and consulting taste as well as utility, each visitor would take home, or order to be sent to him at the proper season, a selection of choice fruit, rare flowers, ornamental trees and shrubs, and perhaps some of each. This visit forms so pleasant an excursion by a good and cheap daily steam boat passage to Flushing, where there is an excellent and spacious hotel to accommodate select parties, that I am surprised they are not more frequently pleased to view Mr. Prince's splendid collection, to dine, and if necessary return the same day to New York.

In this collection the southern and westerns will see many articles, which, although confined to the greenhouse at Flushing, will flourish in open exposure with them.

The variety of olives, the 33 varieties of the citron, the 28 varieties of the splendid camellia, the 8 varieties of gardenia,—the laurus in varieties, Chinese magnolias, myrtles, narcissus, 21 varieties of passion flower, 491 different roses, 160 pelargoniums or geraniums; at least 50 varieties of superb carnations—more than 250 varieties of foreign grapes, from which to select for every soil and climate of our union. Here we will find the date tree, so precious in the burning sands of Africa, and which will stand the climates south of Virginia. But why should I attempt a list which would fill a small volume?

It is by experiment alone (and that at but little cost) we can ascertain what fruits, trees, shrubs, and plants, will stand our winters from Maine to Florida. The writer of these researches has successfully introduced to open planting, many trees and shrubs, heretofore thought too tender.

It is said that the Bostonians have evidenced great taste in their green-houses and pleasure grounds; if

they cannot in their hot and green-houses embrace the whole of Mr. Prince's splendid collections, yet his fine fruits are an object of deep interest, while his hardy and ornamental trees and shrubs, possessing such a variety of leaf, growth, colour and bloom, are well calculated to give effect to rural economy and to ornamental planting. Permit me to remark, that no blame should be imputed to Mr. Prince, if a pear, apples, cherries, &c. highly esteemed in Maryland, should not be approved in Massachusetts or in Virginia. I know by experience, that every fruit has its favourite soil and climate, and therefore to insure to ourselves fine fruit, we should try all, and stick to that which is best. The subscriber is annually extending his collection from Mr. Prince's nursery—he does not experience any disappointment, every article, both hardy and tender, reaches him in perfect security, put up with such exact neatness, that there is nothing lost.

If the passage is long, all should be gradually exposed to light. Now commences the proper time for the removal of all deciduous trees.

My southern and western friends let me recommend, that you take home with you a portion, if only a small one, of this invaluable collection. Attentively examine the catalogue, and let your children at some distant day have it in their power to say, "my parents brought this here from William Prince's nursery in the year 1826." F.

EXTRACT OF A LETTER TO THE EDITOR.

WITH SPECIMENS OF SUPERB GRAPES!!

MY DEAR SIR, Port of Oxford, Sept. 26, 1826.

I am very sorry to see in yours of the 22d ult. the little specimen of fruit I sent you was damaged before you received it; and although I had the honour to receive your statement with the basket; yet I have not had baskets to send you more in time as I wanted to do; for few of my friends in Baltimore return the baskets. I now send you a small basket of grapes, but regret that some sorts are out that I wished you to see. My Muskatong peaches and large Heath, as all my fruits, came sooner this year than common, owing to the great drought before harvest. I send you some red Ham-burgh grapes, and Jersey and Guernsey ditto, and only a dozen berries of the White Scuppernong,* and they are the refuse and last of the fruit that can be found on the vine. It never bore before this year, (three years old.) I find them worth propagating.

I am, dear Sir,

With due respect, your friend,

JOHN WILLIS.

LARGE EGG PLANT.

(From the Frederick Town Examiner.)

An egg plant, (*Solanum*.) was raised in the garden of the Rev. John Dubois, at Mount St. Mary's, near Emmitsburg, which, in circumference, is 28 inches, its weight seven and a half pounds. Though by no means as large as some this Reverend gentleman has raised, it is sufficiently of the mammoth growth, to entitle it to the denomination of a curiosity, and to the inspection of those who delight in viewing the progress of industry.

—A sweet potatoe, from Somerset county, was shewn to the Editor of the American Farmer last week, which weighed eight pounds two ounces.

Colonel Carr, at his garden near Gray's Ferry, in the vicinity of Philadelphia, has this season, out of less than half an acre of vineyard, on a dry gravelly hill adjoining the garden, sold 1200 pounds of grapes at from six to twenty cents per pound, and made two hundred and sixty gallons of wine, valued at two dollars the gallon.

* A large grape of delightful flavour.

* Communications to the Board of Agriculture, vol. i. p. 219, 3d edition, p. 226.

TABLE OF THE PRINCIPAL KNOWN WINES, AND OF THE QUANTITY OF ALCOHOL IN WINES.

Where produced.	Generic Names.	Varieties.	Quantity of Alcohol in 100 parts.	Qualities.	Where produced.	Generic Names.	Varieties.	Quantity of Alcohol in 100 parts.	Qualities.
Portugal	Red. Port	(average)	22.96 B*			White. Hermitage	Crozes, Gervant, Mercurol . . .	—	Less delicate
		Vinho de Ramo	15.62 F	Deep purple, rough, bitter, sweet, spirituous.			Vin de paille . . .	17.43 B	vour. Amber color; luscious.
Spain	White. Sherry	Collares	19.75 P			Côte Rotie	Verinay . . .	12.32 B	Resemble He in flavour, t weaker.
		White. Bucellas	18.49 B	Pale straw; flavour delicate.			Seyssuel	—	Violet perfume
		Setuval	—	Amber color, sweet			Clarette of Die	—	Light, sparkling
		Carcavellos	18.65 B	Deep do.; nutty and aromatic			Red. Tavel	—	cate. Bright rose co
		Amontillado	19.17 B	Amber color, sweet and aromatic.			Chuzlan	—	vour and aro
		Paxarete	—				Beaucaire	—	cate.
		Malaga (A. D. 1868)	18.94 B	Amber; flavour delicate, rich, sweet			St. Geniez	—	
		Pedro-ximenes	—	Color deeper; sweet luscious.			Lirac	—	
		Lagrima de Malaga	—				Saint Laurence	—	Inferior.
		Malmsey of Sitges, Priory	—	Resembles Malaga.			St. Joseph	—	
Majorca	Red. Tent, Tintilla		13.30 B	Purple; sweet; flavour strong, spicy.		White. Vin de Cotillon	Cornas	—	Full rich color; of Ratafia.
		La Torre	—				St. Peray, St. Jean .	—	Sprightly; flav the violet.
		Peralez	—				White. Frontignan	12.79 B	Luscious, flav the grape.
		Segorve	—	Sweet			Lunel	15.52 B	Bright yellow less luscious
		Vinaroz	—				Beziers	—	Frontignan. Resembles Shei
		Benicarlo	—	Resembles Claret.			Red. Roussillon	—	
		Carinena	—				Bagnols, sur Mer, Cosperon, Collioure, Torremila, Grenache, Terrats	18.13 B	Great body and become tawny old.
		Val de Penas	—				White. Roussillon	—	Bright golden fragrant arom
		Manzanarez	—				Rivessaltes . . .	—	vour of the qu
		Ciudad Real	—	are still, or at most simply creaming; generally paler than Sillery.			Salces (Maccabae)	—	Similar; inferior vassaltes.
France	White. Alba flor	Ay, Hautvilliers, Epernay, Dizy, Avenay, Avise, Oger, Pierry, Clozet, Lemesnil, Cramont, Menil .	17.26 B			Red. Claret	(average)	21.24 P	Red; somewhat sweet.
		White. Champagne Sillery . . .	13.30 B				Lafitte, Latour, Leoville, Chateau Margeaux, Rauzan	15.10 B	Deep purple; d flavour; viole fume.
		Verzy . . .	11.93 B	Good color and body, and a high agreeable flavour.			(Graves) Haut Brion, Haut Talan, Merignac, Artimino, Kiss-nost (average)	13.37 B	Resemble the sorts of Burgur are rougher.
		Verzyna, Mailly, Bouzy, St. Basle, Chamery, Ecueil, Villedemange .	—				Gorce, Larose, Brantmouton, Pichow, Longueville	—	Light wines; o flavour.
		Clos St. Thierry .	—	Colour and aroma of Burgundy, lightness of Champagne			St. Emillon, Canon	—	Harsh; odour o ing sealing-wa
		White. Arbois	—	Inferior to Champ. but resembling it in some of their qualities.			Preignac, Beaumes, Langon, Cerons, Buzet	—	Secondary qual
		Papillon	—				St. Nessans, SaneMont Basillac	—	Sweet.
		Chablis	—				Barsac	13.86 B	Amber color; fu ma somewhat cloves.
		Red Burgundy	14.57 B	Beautiful, rich, purple color; exquisite flavour with a full body, yet delicate and light.			Sauterne	14.22 B	Amber colour; ish.
		Romanée Conti, Clos Vougeot, Chamberlin, Richebourg, Romanée de St. Vivant, Tache, St. George	—		Germany	White. Rhenish	Johannisberger (1788)	8.71 P	High flavour a fume.
	White. Burgundy	Volsay, Volnay, Ponnard, Corton, Vosne, Nuits, Beaune, Chamboll, Morey, Meursegault, Savigny sous Beaune, Romanèche, Torins, Chenas, Tonnerre, Auxerre	—	Excellent wines, but inferior to the former.			Steinberg . . .	—	Strongest of wines; sweeti
		Mont Rachet .	—	High perfume and nutty flavour.			Rüdensheimer (1811)	10.72	Like the forme
		La Perrière, la Combotte, la Goutte d'or, la Genevrière, les Charmes, Vaumorillon, les Grises, Valmur, Grenouilles, Vaudesir, Bougne-reau, Mont de Milieu, Fuisse, Pouilly	—				Markebrunn . . .	—	Soft and delic
		Meal, Greffieux, Besas, Baume, Raucoule .	12.32 B	Dark purple; flavour exquisite, & perfume resembling that of the raspberry.			Rothenberg . . .	—	vour.
							Hock, Hocheimer (average)	13.68 B	Light; acidulot
							Amanshausen, Leib-frauenmilch, Scharlachberger .	—	Considerable b
							Laubenheim, Nierstein	—	Light; delicat fume and taste
							Red. Rhenish	13.96 Z	Delicate perfu taste.
							Bodenheimer (1802)	—	Light, pleasant high aroma.
							Moselle	—	

* B. means on the authority of Mr. Brande; P. of Dr. Prout; and Z. of Mr. Zex.

† A Tuscan wine. ‡ A Canadian wine.

Where produced.	Generic Names.	Varieties.	Quantity of Alcohol in 100 parts.	Qualities.	Where produced.	Generic Names.	Varieties.	Quantity of Alcohol in 100 parts.	Qualities.
Hungary	Tokay	. . . . .	9.88 B	Brownish yellow when new, greenish when old.	Teneriffe	Teneriffe	Malmsey	16.40 B	Luscious, sweet.
					Cape of G. Hope	Constantia	. . . . .	19.79 B	Resembles Madcira
		Tokay Essence	—	Syrupy, thick, muddy.			Red Constantia	14.50 F	Sweet, luscious, pungent.
		Ausbruch	—	Thinner and more vinous			White Constantia	18.92 B	
		Maslas	—	Inferior to the two former.		Steen wine	. . . . .	19.75 B	Resembles Rhenish.
	Meneser	Edinburgh, Rusth, Ofen	—	Sweet, resembles Tokay.		Cape Muschat . . . . .	. . . . .	10.60 P	Sweet.
Italy	Montepulciano	. . . . .	—	Sweet, with high flavour.		— Madeira	(average)	18.25 B	Harsh, earthy taste.
		Aleatico	16.20 P	Brilliant purple; luscious aromatic flavour.	Persia	Shiraz	White	20.51 B	Yellow or topaz color; sweetish; resembles Madeira.
		. . . . .		Greenish color and high flavour.			Red	14.52 B	Resembles Tintilla, with a pitchy taste.
	Verdea . . . . .	. . . . .	—	Golden colour, sweet.	England	Grape wine . . . . .	. . . . .	18.11 B	Resembles Rhenish.
	Trebbiano . . . . .	. . . . .	—	Pale straw color; light.		Raisin wine	(average)	25.12 B	
	Albano	Montefiascone	—	Both red and white; light.		Currant do. . . . .	. . . . .	20.55 B	Various.
	Orvietto . . . . .	. . . . .	—	Red, luscious, sweet.		Gooseberry . . . . .	. . . . .	11.84 B	Brisk like Champagne.
	Lacrima Christi . . . . .	. . . . .	19.70 B	The best Lacrima.		Elder wine . . . . .	. . . . .	9.87 B	Thick, narcotick.
		Monte Somma, Gallite Ischia, Nola, Ottajano, Novella, Torre de Greco, Pozzula	—	Second-rate wines.		Orange do. . . . .	. . . . .	11.26 B	Sweet, luscious, flavour of the fruit.
		. . . . . (average)	25.9 B	Sweet.		Cider . . . . .	. . . . .	9.87 B	
Sicily	Vino Greco	. . . . .	—	Resembles Maderia.		Perry . . . . .	. . . . .	7.26 B	Sweet.
	Marzala	Twenty-one years old submitted to Soemmering's process five years	18.40 P	Both red and white. Resembles Maderia, with the harsh flavour of Sicilian brandy.	Barbary	Mead . . . . .	. . . . .	17.32 B	
		. . . . .	15.28 B	Resembles Claret.	Nepaul	Sycamore wine	Juice fermented with sugar.		
	Syracuse . . . . .	. . . . .	30.00 P	Hermitage flavour.	Sihee	Usuph	Water in which raisins are steeped.		
	Etna . . . . .	. . . . .	15.90 P	A dry red wine.	Tari	Sihee	A grape wine		Strong and harsh.
Ithaca	Red wine of Ithaca . . . . .	. . . . .	—	A fine flavoured white wine.	Hindostan		Fermented juice of the Palmira tree, Borassus flabelliformis, Callu, Tieldy, Saura.		
Cephalonia	Cephalonia . . . . .	. . . . .	—	Pale straw color; sweet.		Sinday	Fermented juice of Elate sylvestris, the wild Date.		
Candia	Rithymo . . . . .	. . . . .	—	Resembles Tokay.	China	Cha	Nearly the same as Tari		
Cyprus	Vino Santa . . . . .	. . . . .	—	Luscious, sweet.	Tartary	Mandurin	Boiled rice fermented.		
Tenos	Red Muscadine . . . . .	. . . . .	—	Luscious, sweet.		Koumis	Fermented mare's milk		
Tenados	White Muscadine . . . . .	. . . . .	—	Luscious, sweet.		Airen	Fermented cow's milk		
Smyrna	Madeira	(average)	22.27 B	Full; pungent, nutty, or bitter-sweet, rich, aromatic flavour.		Kanyang-tsyen	The flesh of the lamb fermented with rice and other vegetables.		
Madeira	Madeira	(West Indies)	21.20 P		Africa	Millaffo	Fermented juice of the palm tree, Congo.		
		Sercial	20.32 B			Pombie	Fermed millet, Caffres.		
					Brazil	Kooi	Fermented juice of Apples.		
					Mexico	Palque	Fermented juice of the Agave.		
					Norway	Birch wine	Juice of Betula alba fermented with sugar.		

RURAL ECONOMY.

CIDER.

(From the American Sentinel.)

Much has been written on the subject of improving cider in various ways, such as straining it from the press, by filtration through sand or coal, by boiling, freezing and racking, and by the addition of other ingredients to strengthen and improve it.—Many of these and other modes are doubtless very beneficial.

But my object is to point out and convince the practical farmer, by stating plain, simple facts, that the most important part towards having good cider is in the *making*—to obtain the strength and spirit from the apple, in the first place, and that in many, if not in most cases, it is not extracted from the pumice. It is needless to state that the rich, dry, sweet apples make the best liquor, or that it is important that the fruit should be ripe and not defective, clean and dry: these things are generally and well understood. The great error lies in the imperfect and hasty manner in which the work is done. It is usually the case that several make their cider at one mill, and each are allowed but a short time; the apples are broken in a *nut-mill* (the kind now in com-

mon use) and put immediately on the platform, and in three or four hours a cheese or pressing is made up, the screws forced upon it immediately, and in a short time the work is done.

Such cider as this, and made from sour hard apples, will have a watery appearance at the press, and an actual sour flavour, and soon as fermented will *inevitably* have a light colour, and be but little different from poor weak vinegar, and poorly compensates the maker. The mode in which cider *ought to be made*, would be to grind the fruit in the old fashioned trough and wheel mill, until completely crushed to a pulp; then remove it into a vat, and let it remain in a mass until there appears a slight fermentation upon it, which will be varied by the weather and ripeness of the fruit from one to three days; then put it to the press, and not work it off too fast on account of having it clear. Your pumice in the vat will change towards a cherry red, and your cider will partake of the same colour, and if not made too early in the season, will have sufficient body to carry it through the next summer, and a good foundation to work upon if you wish to improve it.

My objection to the nut-mill is, that it merely breaks or cut up the apple, and does not crush and grind it like the wheel; still, if the work is *well done*, the pumice will very much improve in fermentation.

To convince you that I am correct, bruise a sour hard apple, and force out the juice, and you will find it thin as water, white and sour, bruise the other side, and let it remain a few days, and you will find the bruise a deep colour, and the juice the same colour, sweet and rich.

I am well convinced that we lose much spirit in the pumice. In New Jersey and the south, the distillers never practice purchasing cider, but receive a certain number of bushels and parts of bushels of apples, (as may be agreed upon,) for a gallon of brandy, and I am told that they pay more, and are themselves better paid, than our cider distillers; they grind them, and ferment the pumice unpressed, in vats, and distill the whole mass; it makes what they call the *apple brandy*, and has a flavour of the seed, which makes it differ from our *cider brandy*, which flavour is more or less liked,—according to habit in use of either. I have often thought that our cider distillers would find it profitable to erect vats, and send round and gather pumice from the presses in their neighbourhood, (which is always wholly useless,) and ferment and distil it. I may be in an error, but I think it would be an experiment by those fitted for it. The stinging of the nose, which you feel in *v* a bed of pumice, is caused by the *from it*.

PERPENDICULAR GRAIN MILL.

A mill, constructed on a new principle, is now in operation on the property of General Van Rensselaer, near Albany, which is said to execute work with great facility. It is the invention of Messrs. Harris and Wilson, of Albany. It is called the "Perpendicular Grain Mill," and may be worked by steam, horse or water power. It occupies but a very small space, and though the stones are but about 27 inches diameter, and require only a one horse power, it will grind four bushels of wheat per hour with ease, and produces excellent flour. The stones, instead of being placed horizontally, are fixed in a perpendicular position, and are brought in closer contact, or separated at pleasure, by means of a screw. They perform two hundred and fifty revolutions in a minute. The machinery is simple and cheap in its construction, and not liable to get out of repair.—This mill is adapted to all the uses of the common grist mill, and has been found to be excellent in grinding paints in oil.

SPINNING FLAX.

Messrs. Hunt & Hoskins, of this state, have invented a machine, for which they have taken out a patent, for the purpose of spinning flax. A small model may be seen by those who have any curiosity to examine what we believe to be a very valuable invention, in the large room at Tammany Hall. As the work has always been done by the fingers, one person could only attend to one spindle. By the present machinery, a woman, it is said, can attend to 80 spindles; and it is obvious that if the culture of flax be attended to in this country, with a view to its domestic manufacture, and should this invention succeed, linen goods may at no distant time become nearly as cheap as cotton.

[N. Y. Ec. Post.]

INTERNAL IMPROVEMENT.

CHESAPEAKE AND OHIO CANAL ESTIMATES.

A letter to the editors, from one of the most respectable gentlemen in Berkley county, Va., states that he has examined, with some interest, the statement of prices by which the Engineers have estimated the cost of executing the work on the Potomac Canal, and that they very far exceed the actual prices at which the same articles sell in market on that route. Lime, for instance, he has himself purchased by retail, of a very beautiful as well as excellent quality, for 12½ cents, and he doubts not a contract by the quantity, might be had at 10 cents. With regard to bricks, he is convinced they could be purchased for three and a half or at most four dollars per thousand. Daily labour, too, which is estimated at 100 cents per day, he says he finds no difficulty in procuring at 40 cents, and when hired by the month, at six dollars—ordinary hands, at least. This is exclusive of the board; but, even included, any number of hands could be employed at an expense not exceeding \$100 per month. He says, "I have a list of articles, and their prices, which will show the edge and the difference between the estimate and the actual cost."

INCREASE OF CANAL NAVIGATION.

We presume that but a few, even of those who are in the daily habit of seeing boats pass and repass upon our canals, are aware of the constant and rapid increase of business through the medium of these artificial rivers. We have taken the pains to obtain the number of arrivals at this city, and the result is as follows:

In 1823 there arrived	-	1,329 boats.
1824	-	2,687
1825	-	3,386
1826 to 1st Sept.	-	4,380

It is probable that the arrivals this year will not be far short of SEVEN THOUSAND; and there is every prospect that the increase will in future be in the same ratio with the past, until it will become absolutely necessary to make another canal, double the locks, or adopt some other means, to facilitate the transportation of the products of the west, which must all concentrate at this point on their way to market. When the Ohio canal shall have been completed, an immense sum will be added to our canal revenue. [Albany Advertiser.]

LADIES' DEPARTMENT.

BUTTER.

Well made pure butter is lenient and nourishing, eaten cold, in moderation, with bread. But upon hot new bread, or hot toast, or used as sauce to animal food, it is not wholesome. In the two first instances it is very apt to turn acid in the stomach; and in the latter, to float uppermost in the stomach, and disturb the digestion. If melted thick and carefully, and eaten with vegetable food and bread only, it is not so liable to this objection.

Butter is good for dry constipated habits, but not for such as are bilious, asthmatic, or corpulent.

SUGAR.

Sugar used in moderation is nourishing and good, but much of it destroys the appetite, and injures the digestion. Moist sugar is the sweetest, and most opening; refined sugar, of a binding nature. The preparations made of sugar, such as barley-sugar, sugar-candy, &c. are all indigestible and bad, as the good properties of the sugar are destroyed by the process it undergoes in the making them. They are particularly injurious to children, from cloying their delicate stomachs. Young children are in general better without sugar, as it is very apt to turn acid and disagree with weak stomachs; and the kind of food they take has natural sweetness enough in it not at all to require it.

SALT.

Salt, moderately used, especially with flesh, fish, butter, and cheese, is very beneficial, as it naturally stimulates weak or disordered stomachs, and checks fermentations. But if it be immoderately used it has a contrary effect. Very little salt should be used with vegetable food of the grain or seed kind; for the less salt that is put to it the milder, cooler, pleasanter, and easier of digestion it will be. Salt excites the appetite, assists the stomach in digesting crude phlegmatic substances, is cleansing, and prevents putrefaction; but if too much used, it heats and dries the blood and natural moisture. It is best for phlegmatic, cold, and moist stomachs; and most injurious to hot, lean bodies.

Salt-petre is particularly bad for bilious persons.

VINEGAR.

Vinegar is cooling, opening, excites the appetite, assists digestion, is good for hot stomachs, resists putrefaction, and is therefore very good against peptic diseases. It is also very good against peptic diseases. It is also very good against peptic diseases.

the breast, and makes people look old and withered, with pale lips.

The best vinegar is that which is made of the best wines. Lemon-juice and verjuice have much the same qualities and effects as vinegar.

The commonest vinegar is least adulterated.

MUSTARD.

Mustard quickens the appetite, warms the stomach, assists in digesting hard meats, and dries up superfluous moisture. It seldom agrees with weak stomachs.

TEA.

The frequent drinking of a quantity of tea, as is the general practice, relaxes and weakens the tone of the stomach, whence proceeds nausea and indigestion, with a weakness of the nerves, and flabbiness of the flesh, and very often a pale wan complexion. Milk, when mixed with it in some quantity, lessens its bad qualities, by rendering it softer, and nutritious; and, with a moderate quantity of sugar, it may then be a proper breakfast, as a diluent, to those who are strong, and live freely, in order to cleanse the alimentary passages, and wash off the salts from the kidneys and bladder. But persons of weak nerves ought to abstain from it as carefully as from drams and cordial drops; as it causes the same kind of irritation on the tender delicate fibres of the stomach, which ends in lowness, trembling and vapours.

It should never be drank hot by any body, green tea is less wholesome than black or Bohea.

COFFEE.

Coffee affords very little nourishment, and is apt to occasion heat, dryness, stimulation and tremours of the nerves, and for these reasons is thought to occasion palsies, watchfulness, and leanness. Hence it is very plain that it must be pernicious to hot, dry, and bilious constitutions. If moderately used it may be beneficial to phlegmatic persons, but, if drank very strong, or in great quantities, it will prove injurious even to them.

CHOCOLATE

Is rich, nutritious, and soothing, saponaceous, and cleansing; from which quality it often helps digestion, and excites the appetite. It is only proper for some of the leaner and stronger sort of phlegmatic constitutions, and some old people who are healthy, and accustomed to bodily exercise.

FRUITS.

Fruits are of different degrees of digestibility. Those of a hard texture, as some kinds of apples, melons, apricots, several sorts of fleshy plums, and all immature fruits, are difficult of digestion.

Strawberries, raspberries, currants, gooseberries, cherries, green-gages, peaches, nectarines, melting pears, mulberries, figs, grapes, medlars, when all quite ripe, are more easily dissolved in the stomach.

Fruit, moderately eaten, is wholesome, particularly as correcting the grossness of animal food. But an excess of it, and especially of unripe fruit, is productive of many diseases; amongst children in particular, it often occasions such as the nettle-rash, and St. Anthony's fire.

It invariably disagrees with bilious persons, but a sovereign remedy for the scurvy, and is also good for the skin.

It is also good for the skin, and is a sovereign remedy for the scurvy, and is also good for the skin.

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PORTRAIT OF JACK.

The terrier dog, son of English Billy, imported to Baltimore in September, 1826, along with the terrier bitch Rose; the former 15 the latter 12 months old. See American Farmer, Vol. 8, p. 207. We are thus particular in recording what relates to these dogs, for the sake of preserving the means of tracing hereafter, as there will doubtless be occasion to do, the pedigree of their progeny.

It will be seen that the gentleman who took great pains in procuring the best to be had in England, says they are both out of celebrated fox terriers. The sporting books and works on natural history

inform us, that in England every pack of hounds is accompanied by a terrier, on account of their expertness in forcing foxes from their holes. With us they might be employed for the same purpose with equal advantage. But they are more used and valued for their natural antipathy to rats, mice, and other animals of that sort. Touched, as Jack is, with the blood of the bull dog, they become also formidable watch dogs, willing and capable to defend the stable, meat house, poultry yard, &c. not only from rats and mice, but from mischievous and thieving curs, whether of four or of two legs!

SPORTING OLIO.

BLOOD HORSES.

(From the New York Evening Post.)

Great exertions have been made by a few gentlemen in this city and the neighbouring towns, to improve the breed of horses from the best blood and stock that could be procured, nor have they laboured in vain. With an *Eclipse* to build upon, they have reared colts that are able to contend with any thing hitherto brought against them in the field. Several have been purchased at enormous prices and taken out of the state, but we have materials enough left and can raise more. We are unquestionably indebted for our best stock thus far, to direct importations from England, and although it is not perceptible that the breed deteriorates in this country, yet we are pleased to learn of the recent arrival of the bay colt *Valentine*, imported during the last month, in the ship *Dalhousie Castle* to this city, the property of Thomas Connah, who came out with him, and consider it a great acquisition to the stock of this state. He is now at Bathgate's stables, Westchester, and will be four years old

next grass; he will be exhibited at the next show of horses at the Union course, and his speed and bottom fairly tested, should no accident prevent his running. In the mean time for the benefit of sportsmen, it may not be improper to give his pedigree contained in the following letter from Holdsworth's stud groom to T. Connah.

Farmfield, Feb. 23, 1826.

Pedigree of bay colt *Valentine*; he was bred by Mr. Holdsworth in 1823, got by *Magistrate*; dam *Miss Forrester* by *Diamond*; grand dam by *Alexander* out of *Capt. Absolute's* dam, by *Sweet Wilkam*; *Thetis* by *Chymist*; *Curiosity* by *Snap*.

Magistrate is by *Camillus*, dam *Lady Rachel* by *Stamford*; her dam, *Young Rachel*, by *Volunteer* out of *Rachel*, sister to the *Maid of All Work*, by *High Flyer*.

Above you have the pedigree of the colt bought by Mr. Wm. Coates, for you, and I have no doubt of his giving every satisfaction; he is perfectly sound, his colour good, viz. blood bay with black legs, and being near 16 hands, cannot fail answering your purpose well. I am, sir, your obedient servant,

JOHN WINANT.

MISCELLANEOUS.

MILLS' ATLAS OF THE STATE OF SOUTH CAROLINA.

The liberal and patriotic state of *South Carolina* has effected a work which no other state has yet done, and which the proudest empires of the old world have failed to accomplish: namely, an *Atlas of its own territory, projected on a grand scale, and embracing every district or county in it on separate sheets.*

In a letter from one of the first houses in Philadelphia, (publishing works of this kind,) to Mr. Mills, we find the following remarks:

"Your *Atlas of South Carolina* is an extraordinary work. There is not at this time a single country in Europe that has an atlas equal to it; and it is only now that France is about to have one on a similar scale. How much more extraordinary would it appear to have an atlas devoted exclusively to *Brittany, Normandy* or other parts of France, as yours is to one of the United States. Considering it an extraordinary thing, we are desirous of sending a copy of your first sheet to one of our friends in France, editor of one of the principal journals, who notices all such matters, and would be very glad to have it as a specimen of what is doing here."

The *Atlas of South Carolina* is of the largest size *imperial*, and contains 28 maps, corresponding to so many districts or counties of which the state is composed, projected on a scale of *two miles to the inch*. Some of the maps occupy a space on the sheet equal to 1000 square inches; the whole are engraved in the handsomest manner by *Tanner*, well known for his talents in this art. The frontispiece displays a general map of the State, accompanied by a brief statistical view of the same, beautifully executed by the house of *Fielding Lucas, Esq.*, of this city, at whose bookstore a copy of the *Atlas* is deposited for inspection.

To accomplish this great work *South Carolina* has spared no expense. Fifty thousand dollars have been expended in making the surveys, which were to include all the judicial divisions of the state under separate heads.

The noble example set by *South Carolina* in perfecting a work of this important character, and the efforts made and making in other states to effect the same object, should serve to encourage and stimulate the legislature of our State to do the same thing. The expenses of making surveys would not be very great at the present time, in consequence of the extensive topographical examinations which are now making in various sections of the State, with reference to internal improvement; and how much would such a work aid us in a right knowledge of this subject.

In connection with the *Atlas of South Carolina*, there is another state work of equal interest, which Mr. Mills has prepared, and which is now in the press; namely, the *Statistics of South Carolina*—embracing both a general and particular view of the state under the several district heads.

In order to obtain, without much difficulty, correct information on the subjects treated of in this work, Mr. Mills distributed a circular through the state, containing queries, to which answers were requested.*

History of the settlement—Origin of its name—Situation—Boundaries—Extent—Nature of soil—Pro-

*As the subjects to which these queries allude are interesting to us also, we have included them here, and would invite the attention of our citizens to the propriety of collecting information on them, as opportunities or leisure occur, especially now, whilst we have yet amongst us many of the original settlers of the country, or their immediate descendants.

ductions—Amount per acre—Value—Towns—Villages—Lakes—Creeks—Streams navigable, or otherwise—State of the roads—Value of land—Division of property—Taxes—Price of grain and other provisions—Market—Timber trees, fruit trees—Expenses of living—Price of labour—Climate, diseases—Instances of longevity—Population—Commerce, manufactures—Cattle, sheep, swine, fish, game, birds—Number of Poor, management and expense of them—Number of blind, deaf, dumb, and lunatick persons—Education—Schools, publick, private, and free—Number and class of religious sects—Eminent men—Customs—Names of places, Indian or other—Rocks, granite, free stone, soap stone, shell or compact lime stone—Mines—Metals—Minerals—Materials for building—Waste land, swamps, quantity reclaimed, expense of banking—What improvements seem wanting—Agricultural and other Societies—State of the Arts and Literature, &c.—Miscellaneous remarks.

A FRIEND TO INTERNAL IMPROVEMENT.
Baltimore, Sept. 23, 1826.

THE UNIVERSITY.

The faculty of the University of Virginia have arranged the plan of a public examination, to take place at the close of the present session. There will be a thorough examination of each particular class, in the respective branches of education, and honorary distinctions will be awarded to such students as shall deserve them, by the superior merit of their attainments. The examination will be conducted so as to afford a fair and full opportunity of testing the proficiency of each student in his class. We have not learned the details of the plan; but they will be made known in due season. This step will tend at once to develop the talents of the faculty and students of this institution, and to furnish evidence of the advantages of the plan upon which education is here conducted. We entertain a confident hope that its result will be highly satisfactory to all who feel an interest in the progress of letters, and in the success of the University particularly.—Amid the numerous institutions of learning which are springing up in our country, and extending their happy influence far and wide over our community, the University of Virginia occupies most deservedly an elevated rank. It is the meridian light of Virginia, and its destinies involve the best hopes and most brilliant promise of our state. We venture to affirm, that the expectations to which it has given rise, will be fully answered.

We take this occasion to remark, that the library and apparatus of the University have recently received many valuable accessions. The books procured in Europe, by the agent of the institution, have been received, and are placed in the room of the rotunda, destined for their reception. The rotunda is almost entirely complete, and is finished in that taste and elegance in which it was designed by the masterly mind of its immortal patron. The utmost order, and the steadiest application have, of late, distinguished the students of the University, and every thing seems to contribute in advancing the great plan of intellectual cultivation. May God speed the good work!

Charlottesville, Sept. 16.

LONGEVITY OF A TROUT.

Fifty-three years ago, Mr. William Mossop, of Board-hall, near Broughton in Furness, when a boy, placed a small trout in a well in the orchard belonging to the family, where it has ever since remained until last week, when it departed this life—not through sickness or any other infirmity attending old age, but rather for want of its natural support, water, the severe drought drying up the spring which supplied the well; a circumstance unprece-

ented for the last sixty years. "Ned," as Mr. M. named this finny hermit, would receive from Mr. M's hands, snails, worms, &c. and always seemed pleased at the presence of its feeder, frequently moving its tail and fins with the greatest rapidity, and approaching the surface of the water. At several times trouts were put into the well, which were instantly devoured by the solitary inmate, who had increased in size, and weighed about 2 lbs. Time had changed poor Ned's appearance, once being a fat, well proportioned trout, but lately resembling a small codfish. His lips and gills were perfectly white—his head was formerly black, and of a large size. This remarkable fish has been visited and considered as a curiosity by the neighbouring country for many years.—*London paper.*

Mr. James Jackson, of Islip, (L. I.) is making a similar experiment with a trout. When it was taken and put into the well, or spring, three years since, it did not weigh two ounces. Last March it was taken out and when put into the scales found to weigh over two pounds. It will rise gently from the bottom of the well and feed out of the hand. And what is very remarkable, it will suffer none of the finny tribe to occupy the same cell, not even one of its own immediate family. Several different kinds of fish, and among them trout of large size, have been put into the well, and all have been immediately attacked, and ultimately killed by this lord of the castle. The object of keeping him a prisoner, is to ascertain, by good feeding, the size to which these delicious fish will attain, and how rapid are their growth.

TO THE LOVERS OF GOOD BEER.

Put two quarts of molasses into a keg with ten gallons cool water. Boil two ounces alspice, two ounces ginger, two ounces hops, and half a pint of Indian meal, in two or three quarts of water about an hour; strain it into the keg while hot, add one pint of yeast; shake it well together, stop the keg nearly tight, and let it stand about twenty-four hours, when it will be fit for use. The whole expense of this quantity will not exceed three shillings.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 6, 1826.

QUERY.—Who has for sale a thorough bred stallion horse, of good size, large bone, blood bay, or dapple grey, of elegant figure? He need not be famed as a racer, provided his pedigree is clear and undoubted, but must be a smart traveller, of good disposition—in short, a horse every way fit to breed from.

Col. Brightup is mentioned in the "Pioneer" as the importer of a large flock of Saxony sheep, and the most extensive cultivator of the vine in South Carolina.

G. F. Miller, at the office of the American Farmer, will receive and transmit orders for fruits, trees, vines, ornamental trees, and shrubbery, flowers, &c. to William Prince, Esq. of New York, whose establishment is noticed at page 227 of this number, by a gentleman of first rate taste and judgment.

CONTENTS OF THIS NUMBER.

Premiums proposed by the Maryland Agricultural Society for their next Cattle Show—Hints to Farmers, by Sir John Sinclair—Prince's Botanic Garden—Superb Grapes—Large Egg Plant—Potatoes—Table of Wines, with their quantity of Alcohol—Cider—Perpendicular Grain Mill—Spinning Flax—Canal Estimates—Increase of Canal Navigation—Observations, butter, sugar, &c.—Flowers—Portrait of Jack—Blood Horses—Mills' Atlas of South Carolina—Charlottesville University—Longevity of a Trout—Good Beer—Editorial.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	5	8	9	12
BEES-WAX, Am. yellow	—	30	31		50
COFFEE, Java,	—	16 1/2	17	20	22
Havana,	—	15	16 1/2		20
COTTON, Louisiana, &c.	—	11	13		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12 1/2	14	16	18
Dipt,	—	11			14
CHEESE,	—	8 1/2	9 1/2	12	15
FEATHERS, Live, . . .	—	30		37	
FISH, Herrings, Sus.	bbl.	2 37 1/2			
Shad, trimmed, . .	—	5 50	6 00		
FLAXSEED, Rough, . .	bush	75	80		
FLOUR, Superfine, city,	bbl.	4 62	4 75	5 25	6 00
Fine,	—	4 37			
Susquehanna, superfi.	—	4 00			
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	60			
white	—	65	68		
Wheat, Family Flour,	bbl.	95	1 05		
do. Lawler, & Red, new	—	85	90		
do. Red, Susque. . .	—	90	93		
Rye,	—	60	65		
Barley,	—	80	1 00		
Clover Seed, Red . .	bush	4 50		5 00	
Ruta Baga Seed, . .	lb.	87	1 00		
Orchard Grass Seed,	bush	3 00		3 50	scarce
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	4 00		4 50	scarce
Oats,	—	46			
Beans, White, . . .	—	1 50	1 70	1 87	
HEMP, Russia, clean, .	ton	215			
Do. Country	—	120	130		
HOPS, 1st sort, . . .	lb.	12		25	
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	7			
Bar	—	7 1/2	8		
LEATHER, Seal, best,	—	22	23	32	
MOLASSES, sugar-house	gal.	46	50	62 1/2	75
Havana, 1st qual . .	—	30		37 1/2	
NAILS, 6x20d. . . .	lb.	6 1/2		9	
NAVAL STORES, Tar,	bbl.	1 50	1 62 1/2		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter .	—	68	70	88	
PORK, Baltimore Mess,	bbl	11 00	11 50		
do. Prime,	—	8 50			
PLASTER, cargo price,	ton.	3 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2 1/2	3	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5 1/2	7 1/2	10	12
WHISKEY, 1st proof, .	gal.	32	33	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	29		50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	9 50	10 00		
Louisiana,	—	8 75	9 75	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	16 1/2	17	25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	46	47	75	
SHOT, Balt. all sizes, .	c. lb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lishon,	—	1 05	1 10	1 50	1 75
Claret,	doz.	4	8	5 00	8 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinners' or Pulled, .	—	20	25		

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AGRICULTURE.

ON THE USE OF LIME IN AGRICULTURE.

(From the 3d vol. of Memoirs of the board of Agriculture of the state of New York.)

Lime has been long and profitably used in some of the counties of Pennsylvania, in the business of husbandry. It has stood the test of experience, and many farmers who had abstained from its use, on the introduction of gypsum, are again resorting to it, we are told, as the cheapest and surest means of increasing fertility to the soil. We believe that, on trial, its use will be found no less beneficial in New York than it has proved in Pennsylvania, and in Great Britain. At all events, as lime exists in great abundance in most of our counties, it is of importance that the question should be settled by careful and repeated experiments.

The importance of the subject induced us to write to Pennsylvania, for such information as might serve to guide us in the application of this useful fossil for the improvement of our farms. The two letters which follow have been received in reply to our inquiries. They come from practical farmers, and although the information which they contain is not so full as we wished, it is nevertheless sufficient, we hope, to induce the enterprising cultivators of our state to give the subject a fair experiment.

It may not be amiss to state the qualities of the Pennsylvania lime-stone, and to remark, that we shall endeavor to obtain an analysis of specimens of our own state; which, if we obtain in time, shall be inserted in a subsequent page of this volume.—Professor (now president) Cooper examined specimens of the former, obtained from nine different localities. The results of the analysis were as follows:

No.	1—100 parts gave	Pure lime.	Silex.	Alu. mna.	Carb. of Magnesia.
1	83	3	2	12	
2	81	3	2	14	
3	80	4	2	14	
4	76	4	6	14	
5	81	5	2	12	
6	82	2	0	16	
7	85	1	0	14	
8	85	1	0	14	
9	54	36	6	4	

Of these, No. 7 is regarded as the strongest for building or for land, and No. 9 the weakest. The first four are strong lime—five and six of medium quality, and No. 8 nearly equal to No. 7: that is according to their reputation in the neighborhood.* Magnesia, in the proportions indicated in the foregoing results, is not prejudicial to vegetation;—though a greater proportion (22 per cent.) has, according to Tessnaut, been found injurious in Great Britain.

Letter from Cyrus Jacobs, Esq. dated Spring Grove Frge, Nov. 8, 1824.

J. BUEL, Esq.

Dear Sir—In answer to your queries about lime, I have to inform you that, until within the last two or three years, it was but little used as a manure in this neighborhood; it is now more used, and on all soils; some farmers put on first, from thirty to forty bushels per acre, and in two or three years afterwards, about the same quantity; the general opinion is here, it operates on corn and clover the soonest. It is put on the land in different ways here; but generally the land is first ploughed, and the lime hauled out of the kiln before it has slacked, and put on in about one bushel in a heap; and as soon as it is slacked spread immediately, and harrowed twice over and then ploughed in; and in dry weather it often happens that we have to haul wa-

ter to slack it. Others have the ground all ready for seeding, and haul the lime and put it on the same way, and as soon as slacked, spread it and harrow it twice over, and then sow the seed and harrow it twice over again, which mixes it very well and keeps it near the surface of the ground; this method I think the best;—both the above methods are here used. I have had put on my land this season between seventeen and eighteen thousand bushels of lime, and have put it on in both the above ways, and have not put on less than sixty or seventy bushels per acre, nor more than one hundred. I have no hesitation in saying, that I have experienced fifty per cent. benefit in corn and grass; in our wheat crops I cannot yet so well judge the benefit, not having limed my land more than two years past, but have not the least doubt but I shall be amply repaid for all the cost and trouble of the lime. Our lands here are nearly all lime-stone land, and of a good quality, and will bear more lime than land of a poorer quality; but it is the general opinion that the poorer soils agree best with lime, and receive the most benefit from it; and no doubt it is the case. Some are of the opinion that lime-stone land is not much benefitted with lime, particularly for wheat crops, though that is not my opinion; and should I be spared a few years, I shall be better able to judge, as I have, for these last two years, been liming my land on a tolerably large scale; and have not the least doubt but I shall be fully recompensed for it, both in my wheat crops and other grain; in corn we have already experienced the profit.

I remain, dear sir, very respectfully, your humble servant.

CYRUS JACOBS.

Letter from Daniel Buckley, Esq. dated Salisbury, Pa. Dec. 19, 1824.

J. BUEL, Esq.

Dear Sir—I received your favor of the 16th November, requesting information as to the effects of lime upon various soils, the methods of application, its duration as a manure, on what crops most immediately useful, and on what remotely, the quantity applied, and at what intervals repeated, the price, &c. A want of confidence in my ability to answer these queries suitably, will compel me to confine my remarks principally to the sphere of my practice and personal observation.

The land which I cultivate, according to McClure's treatise, is transition, composed of white and yellow clay and lime-stone, much of the latter appearing on the surface, intermixed with flint. Upon this soil I have made a liberal use of lime ever since the year 1790, and think I have been well rewarded for the expense and labor, by the increased value of my crops.

The method of applying the lime, which I have adopted in common with my neighbors is, in the first place, to plough up a sod field with a strong team, in the spring or fall, harrow it the way it is ploughed, and mark the field into as many squares as you intend to put on half-bushels, say 100 on the acre, which will bring the furrows about 20 feet apart each way, and require 50 bushels to the acre. This quantity I have found to be most profitable.—When the lime is burnt, and as soon as it is cool enough to handle, it ought to be hauled on the land already marked, and a half-bushel deposited in the centre of each square, in as compact a heap as possible. If water is convenient, I prefer to slack the lime immediately, rather than to wait for rain, as it becomes finer and can be more evenly spread. As soon as it has slacked, it is immediately spread and well harrowed. This method I prefer for Indian corn, barley, oats, rye and potatoes. On all the above crops I have experienced a great benefit from lime the first year after its application. With potatoes I add about 15 two-horse loads of barn-yard manure to the acre, before planting. A second liming is often given, and much approved of, after an interval of three or more years. This amalgamates

better, and can be more intimately mixed with the soil.

There are good farmers who differ as to the quantity of lime that is most profitably applied. Some say 60 bushels on the acre, some 70, and some more. I have applied 100 on an acre of lime-stone land, at a dressing; but have not been able to discover any benefit from using it thus freely, nor any injury, except in the loss of lime.

Wheat seldom receives any benefit from lime until the second or third year after it has been applied, except it has been mixed in a compost of yard manure and earth. This method is much practiced in the lower counties of this state; though not by good farmers until they have applied lime as the basis of melioration. By this management they have raised their lands from an impoverished state, produced by injudicious cropping, to such a state of fertility, as, I am informed, to enable them to fatten a bullock of six hundred weight on an acre, and to cut grass from the same acre sufficient to winter another.

Sandy soils are greatly improved by the use of lime. I lately purchased some of that kind, which was originally covered with chestnut timber, and was called mountain land. It had been cleared seventy years; but lying a distance from the farm buildings, had never received any manure but a dressing of lime. This land I have had repeatedly farmed since I owned it; and although to appearance it seemed to be almost a *caput mortuum*, with the aid of ten or twelve four-horse loads of the gleanings of a yard of a public house, it has produced as much, and as good wheat, rye, oats, timothy and clover to the acre, as any land in the township in which it lays. I consider the liming which it had fifty years ago as the principal cause of its fertility.

It is a general opinion amongst good farmers, that liming should be repeated every ten or fifteen years, and that the increased crops richly compensate the expense. It matters very little how it is applied, provided it is evenly spread immediately after it is slacked. If suffered to air-slack, or to lie after it has been water-slacked, it re-imbibes carbonic acid, which the air had expelled, becomes lumpy, and is more difficult to be incorporated with the soil. Some spread it upon the sod, and plough it under, and think they have as much profit from it in this way as in any other. When thus applied, it powerfully contributes to decompose the tougher fibres of the sod, and to convert them into nutriment for the crop.

The price of lime is governed by the price of wood, the distance the stone has to be transported, the construction of the kiln, and the experience of those who burn it. Where wood costs but one dollar a cord at the kiln, where the stone has to be carted not more than the fourth of a mile, the kiln well constructed to contain 800 or 1,000 bushels, and the workmen understand their business—the lime can be sold at eight dollars the hundred bushels at the lime-kiln, and leave to all concerned a fair compensation for their labour and expense. I have paid 25 dollars per hundred bushels, delivered on the field, at ten miles distant from the lime-kiln, and think I could not have applied my money to better advantage. This was applied to land of the old red-stone formation. The produce has far exceeded my expectation. I however make use of barn-yard manure and plaster of Paris; the former at the rate of ten four-horse loads the acre; and the latter at the rate of a bushel and a half, on rye, timothy and clover. Yet I consider lime as the *real mother* of all the sweet grasses.

I am, with sentiments of esteem, your obedient servant,

DANIEL BUCKLEY.

P. S. I have omitted to state, that on land which has been much exhausted, or has naturally a thin soil, we do not apply more than 30 or 40 bushels to the acre, at the first dressing; but in three or four

*See Memoirs of the Philadelphia Agricultural Society, Vol. 3 p. 106 of appendix.

years afterwards the lining may be repeated to advantage, to the extent of fifty bushels on the acre.

*Letter from William Chapman on the use of lime in
ariculture.*

SIR—Agreeably to your request, I now communicate to you my experience in the use of lime in husbandry.

First.—While with my father in England, I assisted to set out large quantities of lime as a manure. It was applied to all soils upon his farm, viz: moss or turf, clay, black or yellow loam and sand loam. We put on from two to three hundred bushels the acre. I have seen land that before liming was so poor that it would bear nothing but bent and moss, after liming give the heaviest crops of oats and wheat for ten years, and I have no doubt it would have produced good crops for ten years longer, with suitable alternation of grasses.

Second.—I have set out lime on my farm in this country, on stiff clay and on loams, in considerable quantities. It has been particularly beneficial on the clay. I had one field which would produce nothing of consequence until I limed it; after which I sowed it with rye and grass seeds. Both the grain and grass were good, and it is now covered with a fine rich sward. I have used lime for several years, and my confidence in its benefits have not at all been diminished.

Third.—I am satisfied that lime is a preventive of smut in wheat, rye, oats and barley, if the seed, previous to sowing, is steeped in brine or lime water, and rolled in fresh-slacked lime. And I am equally satisfied it will destroy the insect, or Hessian fly, in the young grain, if sown in the morning when there is a heavy dew on the crop. Some years ago I sowed some spring wheat, and as I had no salt at my farm to make brine, I took stone lime, and slack-ed it in a tub of water; and when the water was as warm as I could bear my hand in, I put in the seed, skimmed off the light matters which floated, and continued stirring the grain for half an hour or more. The grain was then sown; and when it came into its third or fourth leaf, although it looked well, I sowed fresh-slacked lime over the field while the dew was upon it. The crop was very good;—while all my neighbors, except one, lost almost their entire crop of spring wheat. This one happened to be passing while I was sowing the lime on my young grain, and at my suggestion, went home and sowed it upon his own also, and, I understand, had a good crop.

In the spring of 1823, I had about three acres of winter wheat, a portion of which looked very yellow when the snow went off. I directed this to be sown with lime; but on visiting my farm two weeks afterwards, I found it had not been done, and that the whole field presented a little yellow appearance.

had the whole grain immediately and a total of 100,000 bushels should be available.

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1. **Introduction**
 2. **Background**
 3. **Methodology**
 4. **Results**
 5. **Conclusion**
 6. **References**

[Such is, and such always has been the cry of our farmers; and the present times, it must be confessed, are hard, if we compare them exclusively with *much better* times, so far as relates to the prices of agricultural produce. But before we can feel justified in complaining of hard times, and general distress, ought we not to look to worse times as well as better? and to other countries as well as our own? It is true that wheat will not fetch \$2 per bushel, neither will tobacco bring \$100 per hoghead. But does the happiness and the comfort of life consist, indispensably, in these prices? Has not the farmer an abundance, and more than he can devour of meat and bread? Does he not manage scandalously whose garden does not furnish him with plenty of good vegetables? and whose dairy does not yield milk and butter to consume and to spare? Cannot every farmer raise wool, and cotton and flax, to clothe his family and his people? He who has not enough of all these, owes the deficiency to his own want of industry and plain obvious management; and with an abundance of meat, bread, vegetables, milk and clothing, beer and cider, is it not, under Providence, ungrateful to be forever repining, and moping, and complaining about hard times! hard times? Where is the nation, we speak of the mass of the people, on the habitable globe that would not, if they could, gladly change "times" and condition with us, and felicitate themselves and sing hallelujahs to that kind Providence which had supplied the means of gratifying every want that is essential to wholesome and comfortable living? The bane of our happiness consists in confounding *luxuries* with *necessaries*; and in keeping our imaginations forever fixed on those who have, *per fas* or *per nefas*, accumulated the means of pampering their morbid and vicious appetites with every dainty, and their vanity with all kinds of empty show; rather than on the millions in other countries who are literally naked for want of clothing, and perishing for want of bread! If we would look oftener at these, we Americans would cease to outrage Providence with the false cry of—*hard times!* To a benevolent mind it must be painful to draw contentment from the contemplation of the wretchedness of any portion of our fellow creatures; but reason teaches us that such contemplation does not aggravate their calamities, whilst it instructs us that ours has no reality.

To form a better estimate of our own condition here in America, let us turn our regards to the people of Great Britain—that nation which is said to be the most industrious, skilful and enterprising, and to be governed by the wisest policy ever pursued by public councils; let us read the following items taken from late English papers:—

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the 1990s, the number of people in the world who are undernourished has declined from 1.1 billion to 800 million. The number of people who are malnourished has declined from 1.5 billion to 1 billion. The number of people who are obese has increased from 100 million to 300 million. The number of people who are overweight has increased from 100 million to 300 million. The number of people who are obese and overweight has increased from 100 million to 300 million. The number of people who are obese and overweight has increased from 100 million to 300 million.

המחיר של המכשיר הוא 1,200 ש"ח, והוא ימכר במסגרת תוכנית "מכשירי חירום" של משרד הכלכלה, המיועדת לסייע לבעלי עסקים קטנים ולמשפחות במצוקה. המכשיר ימכר במסגרת תוכנית "מכשירי חירום" של משרד הכלכלה, המיועדת לסייע לבעלי עסקים קטנים ולמשפחות במצוקה.

port should be made to depend upon their industry and good conduct. We think we could mention one workhouse not many miles from Hyde Park corner, which could supply the farmers of Canada or New South Wales, or the Cape of Good Hope, with about a score of hale, strong, and lusty wenches, for in or out-door work, to the great relief of such parish, and certainly to the aid of the colony to which they should be so sent.

We have hitherto abstained from entering upon the distressed state of Ireland, because our attention has been occupied with the sufferings of our own manufacturers, and because the accounts were not so full as we have lately found them to be. It now appears from all concurrent reports, that Ireland, and Dublin in particular, is in a state of extreme misery, and that the approaching autumn and winter are anticipated with general apprehension.

The causes are too obvious to require any explanation. In England, the dependence of the poor people is upon being employed in manufactures, commerce, and in the mechanic arts and trades necessarily called into exercise by the activity of an immense trade. In Ireland, there are no manufactures of any general extent, and no commerce worthy of notice; and as the agricultural cultivation of one year is the same as that of another, and is necessarily limited, agriculture can make no demand for labour corresponding with a perpetual increase of population. In Ireland, therefore, three-fourths of the poor are thrown entirely upon themselves, and rise in the morning, and go to their cabins at night, *without having any master, employer, wages, or labour.* They have, therefore, to live as they can, and the usual mode is, to outbid each other for some small patch of land, not exceeding the size of a bowling green, upon which to grow potatoes, and for which they pay a price amounting to a rate of eight or ten pounds English an acre, the farmer himself paying his own landlord a guinea and a half, or two guineas per acre. In this way, all the farms in Ireland, or almost all, are distributed out into small potato beds, each bed having its family and its cabin. From the drought of the present season, all these potatoes have failed, and the poor families are thus at once without food, without any call for their labour, or any resort to poor rates.

It is unhappily too evident what their condition must be, unless public and private charity should come forward to assist them. In England, there can scarcely exist such a state of things as *absolute famine*, because our poor in all cases can resort to the poor laws; and, if the price of provisions rise too high for the rate of wages, every parish must come forward and support its own poor. In Ireland, as we have above said, there are no poor laws. Again, in England, as the vast extent of our agriculture, commerce, and manufactures must always make a proportionate call for labour, and as the poor can give their labour except at a price a little above the cost of their subsistence, the rate of wages must be regulated by the price of provisions, and when t

provisions, and when naturally (by scarce seasons, restrictive laws,) enhanced gradually follow. And more labour th

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We, therefore, most earnestly trust, that this state of suffering amongst the Irish poor, will be attended to in time. It has already commenced its ravages, and the future consequences may be foreseen, unless prevented. It is, therefore, the duty both of the English and Irish governments, to lose not a moment in timely precautions against this evil, the evil of an absolute famine, and epidemic pestilence. And let it be remembered (we feel it a duty to repeat it a third time,) that Ireland has no poor laws, and therefore unless this relief be given, the population must be absolutely starved.

Extract from a letter of an Essex Farmer.

Let us suppose, what in good times (I do not mean high, but remunerating times,) is pretty nearly the fact, that the gross produce of an arable farm is divided into four equal parts, and that one of these goes for tithe rates and taxes; another for labour, including blacksmiths' and wheelwrights' bills; a third is paid to the landlord for rent; and the remaining fourth belongs to the farmer, as the hire of his capital and the remuneration of his industry and skill. We will put the case, that the gross produce of a particular farm sells for 600*l.*; one-fourth of this is 150*l.*—therefore 150*l.* is what the tenant of this farm has to live upon. We will suppose that the price of agricultural produce is reduced one-third. Now, therefore, the gross produce of the farm in question is reduced to 400*l.* The farmer's fourth, therefore, will be 100*l.* instead of 150*l.* The farmer will, therefore, be a loser by the depression to the amount of a third of his income. In point of fact, however, he will lose more, as we shall presently see. The value of the gross produce is by the supposition reduced one-third. If, therefore, the three first shares are reduced one-third each, the overplus, or share that remains to the farmer, would be reduced one third also, and no more; but this is not the case. Labourers' wages will be reduced, and so must the bills of the blacksmiths and wheelwrights. The claim of the tithe owner will be reduced in proportion to the depression in the value of the titheable commodities; but not so the government taxes; they will remain stationary, and consequently constitute a larger proportion of the reduced, than they had done of the original, value of the gross produce.

As, therefore, one of the shares will be greater than a fourth, it follows that the remaining three, some or one of them, must be less than fourths. In the long run this loss, occasioned in consequence of the fixed nature of the government taxes, will be distributed pretty equally between the landlord, the farmer, and the farmer's labourer; but in the first instance it will probably fall (as a few years back it did fall,) upon the two last with appalling force, ruining the former and crushing the latter into the lowest degradation of pauperism.

STATE OF TRADE.

On Friday, about half past 12 o'clock, the Earl of Liverpool received a Deputation of Manufacturers from Birmingham, composed of the following gentlemen: Charles Jones, Esq., Benjamin Hadley, Esq., and T. C. Salt, Esq., whose object was to present to his Majesty's Government a memorial of the extremely depressed state of trade in that town, and praying that some measure may be devised for its immediate and effectual relief. The Chancellor of the Exchequer and Mr. Secretary Peel accompanied the noble Earl, which occupied the attention of the Ministers about three quarters of an hour.

The accounts from the manufacturing districts show as yet no mitigation of distress. Information has been received by government, founded on pretty accurate data, that in Lancashire alone there are at this moment near 300,000 human creatures who are absolutely without employment. [Times.

Bolton.—The trade of this town is in a worse condition than when we last addressed the public; the shops are almost deserted, and to such a state of destitution are the poor reduced, through the want of a proper supply of sustenance, that several persons fainted away during the last week, and some have died, it is supposed, from the same cause. These were working people, who, there is no doubt, would have viewed the prospect of employment as the greatest blessing that could be bestowed upon them. The depression of the cotton trade is deeply felt here. Goods which, twelve years ago, were worth 72*s.* a piece, are now sold for 14*s.*! The following fact is, perhaps, more striking still: The weaving of a Bolton 60 reed cambric, at the former period, cost 26*s.*; the same work is now performed for 4*s.* 6*d.* The retail tradesmen are sinking to ruin. Within ten days, five publicans, who, twelve months ago, were doing well, have been sold off under executions for debt. The houses are becoming empty for want of tenants; while several families are huddled together in a single apartment! [Bolton Chronicle.

Paisley.—The following is the substance of the weekly Report of the Operative Relief Committee: "We are yet unable to report that there is any improvement in the situation or prospects of the district. The number of novel and necessitous cases, which, after investigation, have been placed on our list for relief, during the last week, exceeds the number of those who have obtained employment elsewhere, and been struck off it. The sum of distress is therefore considerably increased, and our fund is again rapidly drawing to a close. The harvest, which is now becoming general, may in some degree afford occupation; but the great bulk of the dependants on the committee are unaccustomed to the labours of the harvest field, and will continue to require public aid until our manufactures revive, or some new and unforeseen means of employment is devised for them." [Paisley Adv.

We understand from the best authority that Lord Abercrombie, who resides on his family estate of Tullibody, in Clackmannanshire, has, for a considerable time back, employed 100 men daily, who, through the circumstances of the times, have been thrown out of their regular employment, in working upon his domains; not so much for its improvement as to keep them in regular habits, and to preserve them in a comparative state of independence.—[Highly honourable!]

As the distress has fallen with increased severity on the poor of Carrickbeg, who are principally tradesmen, a committee to collect subscriptions has been formed there for some time. By the returns of this committee, it appears, that among the population of Carrickbeg, containing about 4,000 people, there are 163 families, consisting of about 750 individuals, destitute of employment, without food, or money to procure it. [Clonmel Adv.

Blackburn.—We hasten to correct an erroneous impression which we find has arisen in the minds of persons not resident in this town, with respect to our poor's rate, which we stated a fortnight ago to be 2*s.* in the pound. This, it should be understood, is for a quarter, being after the rate of 8*s.* in the pound for the year. With respect to the distressed condition of Darwen, which, twelve months ago, was making most rapid strides in prosperity, a fact has lately come to our knowledge, that conveys a much stronger idea of the extent of such distress than any yet related. A week or two since, a farmer residing in the township was summoned by the overseer for non-payment of the poor's rate. The farmer stated himself to be at that time totally unable to pay it, but requested the overseer to allow

him to get his crop of hay off the ground, when he might take and sell it: and he stated the amount of the rate to be 6*l.* 10*s.* per month, which, supposing it to continue for twelve months, would considerably exceed the amount he paid for rent.

[Blackburn Mail.

RECORDER'S REPORT.

At a Privy Council, which was holden on Thursday, the Recorder of London made his report to the King of the prisoners lying under sentence of death in Newgate—namely, James Crawford, aged 17; Joseph Baker, 19; Ellen Walker, 37; and Mary Ann Pray, 37, for housebreaking. Henry Smith, 22; James Martin, 22; Maria Myers, 57; and George Leslie, 17, for stealing in a dwelling-house to the value of 40*s.* and upwards. John Fordham, 20; Wm. Clark, 40; Richard Mansfield, 21; and John Lawler, 20, for burglary. Patrick Ryan, 14; Thos. Abrahams, 22; and James Reid, 20, for highway robbery. Charles Butcher, 27, for sheep stealing. William Waller, 20; Thomas Wiskin, 22; and Wm. Toffs, 21, for horse-stealing. And Thomas Miles, 32, for coining.

[Other scraps from the same papers.]

FOREIGN TRADE.

A Parliamentary Paper was distributed on Thursday, which enables us to institute comparisons between the foreign trade of the country during the quarter ending 5th April last, and the corresponding quarter last year. There is a considerable falling off generally, both in the imports and exports, but chiefly in the latter.

To begin with the principal manufacture, cotton—the falling off in the import of cotton wool is less than might have been anticipated, considering the speculations of the preceding year. In the quarter ending 5th April, 1825, the importation was 39,552,714 pounds—in the quarter ending 5th April, 1826, it was 35,550,335 pounds.

The cotton exports stands thus:—

	April 5, 1825.	April 5, 1826.
	yards.	yards.
White or plain cottons,	39,211,384	29,433,923
Printed, stained, or dyed do.	44,960,851	36,496,226
Fustians, velvets, &c.	1,758,315	1,806,110
Hosiery, and small wares,	1,224,501	1,182,856
Cotton twist and yarn—lbs.	4,591,047	6,029,915
Cotton-wool—lbs.	505,736	6,701,765

It thus appears, that while there has been a great falling off in wrought cottons, the quantity of twist and yarn exported was considerably greater than last year. The quantity of cotton wool exported is necessarily greater, for last year we were importing cotton from every country.

The linens exported fell from 12,629,164 to 8,779,269 yards.

There is a considerable increase in the quantity of sugar imported and exported. There is a falling off in the European timber imported, and an increase in the British American timber.

Carlisle, Saturday, July 29.

There was only a poor show of lean cattle in our market on the Sands, this morning, and a very languid demand; scarcely a bargain was effected, except in milk cows and back-end calvers, which sold at from eight to 13 guineas; prime ones 14 guineas. At the fortnightly fat market on Thursday, beef sold at 6*s.* to 6*s.* 3*d.* per stone of 14 lbs.; mutton, 5*s.* 9*d.* to 6*s.*; lamb, 4*s.* 8*d.* to 5*s.* 4*d.*; veal, 5*s.* 6*d.* to 6*s.* Supply short, and sale lively. We are now in the very heart of harvest, fully a month before the ordinary time. I have already spoken of the crops; about average produce of wheat. Barley and oats exceedingly thin, and of the lightest quality. Reapers' wages 12*s.* a-week, with meat—

15s. without food, and this for any one that can be picked up at the Market Cross. In my last I am afraid I spoke too favourably of the turnip crop; the late rains have brought forward many fields, but, generally speaking, this useful root has failed for want of moisture. The after-grass comes on slowly. Indeed we are now again very much in want of rain, not having had any for a week, with the thermometer at 80 in the shade in the middle of the day.

Considering the dull and depressed state of the wool markets, partly occasioned by the great importations of that of foreign growth, Mr. Howlett's half-bred Leicester and Down lambs, at his late annual sale at Bowthorpe, fetched very good prices, some as high 21s. and his two-sheer Down ewes obtained 39s. The Leicester tups did not let so well as at his former show. *[Norfolk Chronicle.]*

Lincolnshire wools, which last year at this time sold at two guineas a tod (of 28lbs.) may now be had from the farmers at half that price. One wool grower is mentioned, whose stock last year amounted to 6,000 tods, and who has of course lost 3,000 guineas by keeping that stock one year.

At the annual meeting of the Doncaster Agricultural Society, which was held on the 4th inst. and was numerously attended, lord Althorpe described an interesting experiment which he had made, to ascertain the comparative merits of Swedish turnips and mangel wurzel in the fattening of cattle; the result of which went to prove the superiority of the latter. Two oxen were at the same time put to these different kinds of food, and continued at them for a stated period; that which was fed on mangel wurzel increased considerably more in weight than the other which was fed on Swedish turnips. This fact having been ascertained, the ox which had been fed on mangel wurzel was put to turnips, and the other which had been at turnips was put to mangel wurzel for a similar period, and it was found, at the termination of the experiment, that the ox which had been put from mangel wurzel to turnips had lost weight, while the other which had been removed from turnips to mangel wurzel had gained considerably. His lordship further observed, that during the present drouthy season, when the turnips had been nearly burnt up or destroyed by the fly, mangel wurzel had flourished, and was an abundant crop.

Mr. Henry King, the celebrated agriculturist, of Alvesdeston, near Fovant, in Wiltshire, cut and carried his wheat crop this season, from 570 acres, in nine days. The predecessor of this gentleman died a short time since, it is said, the richest farmer in England, having acquired a fortune of £150,000. Mr. Winter, of Shurford, near Taunton, has a cucumber growing in his garden, which measures four feet eight inches long; it has grown four inches in length since Sunday evening last, and from its appearance is likely to grow to the uncommon length of six feet.

The largest steam-packet ever built in England has arrived in the river, called *The United Kingdom*, James Oman, master, 1,063 tons, two engines of 100 horse power each, built by Steel and Company, Greenock; Napier and Company, engineers, of Glasgow. She makes up 100 separate births; is the most costly and elegant steamer ever built; and, we may truly say, the wonder of the age.

The estimated number of looms propelled by water and steam power in the United Kingdoms, including those in preparation for working previous to the stagnation, and as near as any calculation can be made, is 57,000. The average produce, taking it at 22 square yards of cloth a day, makes 1,254,000, or 1,741 yards in every minute; weekly, 7,524,000; monthly, 31,350,000; yearly, 376,200,000. Allowing six yards to each person for yearly consumption, this will supply 62,700,000, and will cover

62,700 acres of ground, and in length, would extend 213,750 miles, and reach across the Atlantic Ocean 71 times.

A swimming match took place on Thursday, from a boat moored off Wandsworth, through Westminster Bridge. The candidates were Mr. Cranstone, of Bathertace, Millbank, and Mr. B. Stapleton, of Wimbleton. At starting Mr. Cranstone took the lead, and kept it at considerable speed, when Mr. Stapleton passed, and won the match, leaving his opponent opposite Arundel-stairs. The distance is computed at more than four miles, and it was performed within two hours.

NORFOLK.—The crops have been found to ripen in such an extraordinarily rapid manner, after the late fine rains and succeeding hot weather, that in this neighbourhood the farmers are *reaping* instead of *reaping* their wheat, which is housed or stacked almost as soon as cut.

The *Cheltenham Chronicle* says: "In consequence of the extreme drought of the summer, the autumnal fruits are found in this season to be much infested with worms or maggots. This is peculiarly observable in pears. An eminent physician of this neighbourhood has stated his conviction, that a few grains of the discoloured substance to be seen in a pear when worm-eaten, are sufficient to cause a disorder in the intestines of a most dangerous character."

The late temperature has been very favourable to the growth of vines in France. They present the most beautiful and luxuriant appearance in the neighbourhood of Paris. The cultivators of Argenteuil hope, unless any unforeseen accident should occur, to make 80,000 tons of wine.

Mr. Davis, of Slough; has published the result of an experiment for ripening wall-fruit, by covering the wall with black paint, which has completely succeeded, besides adding to the weight of grapes nearly two-thirds.

On a large cement-stone, which was brought last week from the Isle of Shippey to Clayton's cement manufactory at Shoreham, being broken, on Monday last, a live oyster, of an immense size, was discovered in its centre. A live eel, of two pounds weight, was also found in a similar stone at the same manufactory, a few weeks ago.

Political knowledge seems to be spreading fast among the Yankees, if the following particulars extracted from one of their papers be correct:—"In 1750 there were but seven papers in the United States; in 1810 there were 359, including 25 published daily; which circulated 22,200,000 copies annually. In 1823 they had increased in number to 538, and are now about 640, and the extent of copies circulated in the year exceeds 30 millions."

The statutes of this country occupy 45,000 close quarto pages, and the reports of common law decisions continually referred to are contained in no less than 55,000 other pages. So that the evidential books of legal authority consist of about 100,000 pages. These books are of course exclusive of the different abridgments and treatises of law, and arguments and comments on legal decisions. Of these, Vesey's, Comyn's, and Bacon's work contain a quantity of type equal to 200,000 common octavo pages!

A curious action was tried at the Durham Assizes, for the recovery of 12l. the value of a looking glass, which a sheep belonging to the defendant had destroyed. The plaintiff was a jeweller at Stockton, and the defendant was a butcher, who was driving some sheep through that town, when one of them walked up to a looking-glass standing outside the plaintiff's shop, and beheld its own image in it. As the sheep did not happen to be a dandy, the reflection of its own image, instead of awakening its vanity, excited its ire, and it ran against the glass, which was instantly shivered to atoms. The plain-

tiff seized upon the graceless quadruped, and declared he would detain it for the damages—a proposition to which the defendant, who well knew its value, instantly consented. The plaintiff, however, after having kept it for some time, discovered that he had miscalculated as to the worth of the sheep which he retained, and had recourse to law to obtain compensation. It now appeared that the declaration alleged the accident to have arisen from the defendant's negligence, an allegation which the witnesses disproved. For the defendant an objection was taken on this variance between the statement and the proof; and rather than run the risk of a nonsuit, the plaintiff consented to an agreement, by which each party was to pay his own costs, and to leave the damage unsatisfied.

ON THE CULTURE OF THE POTATO.

MR. SKINNER, *Frederick county, Va., Sept. 27, 1826.*

Much has been written in your valuable paper upon the cultivation of the Irish potato. As every thing relating to this valuable root is worth attention, I give you the practice of Mr. Hefebower, living near me, which I have adopted with complete success this season. He selects the poorest spots in his fields, ploughs them well in November or December, and in the month of March plants his potatoes in drills two feet apart and two inches deep; then covers the whole ground with wheat or other straw, from eight to twelve inches thick, fifteen will not be too much, for the potatoes will make their way through. This keeps the ground cool and moist, prevents the growth of grass and weeds, saves the labour of ploughing and weeding, and greatly improves the land. Mr. Hefebower last year made an abundant crop, whilst every other person in this neighbourhood failed. To him they have been indebted the last spring for seed potatoes for miles around. Yours, &c. A. R.

SHEEP.

(From the Boston Sentinel.)

Messrs. Editors,—Hay being so scarce the present year, and the crops of corn, oats, potatoes, and turnips very good, I think it is well for farmers to prepare places to feed their sheep daily during the winter, with some other food beside hay. Sheep will digest grain better than any other animals except fowls, and there's no need of grinding corn for either of them. Yet it ought to be ground fine to fatten hogs; and that it may be ground fine, I have, for several years past, kept old corn enough for that purpose.

It is no matter how hard corn is for fowls, as they will digest even gravel stones.

Having been convinced of the utility of feeding sheep with grain in the winter, and having practiced it for forty years, giving but little when hay is cheap and plenty, and more when hay is scarce and dear. I send you the following, which I think will be read with interest by farmers:

Facts and observations in relation to keeping Sheep.

It will be recollected, that in the summer of 1822, the drought was severe in many parts of our country. In Cayuga county, where I reside, and in the adjacent counties, it was greater than in any former year, since the settlement of the county. Our meadows were so much parched, that we did not secure more than one third of the hay we do in ordinary seasons. At this time, my flock consisted of 500 sheep, including about 120 lambs; and as I had a very scanty supply of hay, I was obliged to resort to some expedient to winter my flock upon less than the usual quantity of it.

About December 15, I commenced feeding them, at which time I had only about nine tons of fine timothy and clover hay. I divided my sheep into flocks of about 100, and commenced giving them

about half a gill of corn per day, in the ear, dividing it so as to give half of it in the morning, and the residue in the evening, except that to the lambs I gave nearly the same quantity of oats in the sheaf. I fed in this way, until about the first of January following, when the quantity of grain was a little increased; so that, between the 15th of December and the 15th of April following, I actually fed to my 380 sheep, 145 bushels of corn, and to the 120 lambs, 40 bushels of oats, which would be something less than a gill of corn and oats per head, per day, to both sheep and lambs, during the winter. The flock had little more than enough of hay to form a cud, except that in extreme cold weather, I directed them to be full fed on hay.

In this manner 500 sheep were wintered, with the loss of only three lambs; and at the opening of the spring, they were in better health and condition than any flock I ever wintered in any former season since I have been engaged in rearing sheep and growing wool.

I estimate the expense of keeping my flock of 500 sheep through the winter, as follows:

9 tons of hay, at \$7,	\$63.00
145 bushels of corn, at 52 cents,	75.95
50 do. oats, at 19 cents,	7.60
Salt with the hay, &c.	5.00
Attendance of shepherd,	20.00
	<hr/>
	\$171.55

I have adopted the same course with my sheep, this winter; and from letters recently received from my son, who has the charge of the flock, I entertain a confident expectation of the same result.

JEDIDIAH MORGAN.

Cayuga, March 18, 1824.

HORTICULTURE.

CULTIVATION OF SILK.

The following circular letter, recently addressed to the several governors of states and territories, by the Secretary of the Treasury, and the queries which accompanied it, are now made public, in the hope that the latter, by being thus more widely diffused, may attract the notice of individuals whom they might not otherwise reach, and who, possessing both the ability and the disposition to supply, if not all, a portion of the information desired, may, by so doing, further subserve the purposes of the resolution of the House of Representatives, on which the queries are founded. [Niles' Register.]

Circular to the several Governors of States and Territories.

TREASURY DEPARTMENT, July 29, 1826.

Sir,—A resolution was passed by the House of Representatives at the last session of Congress, which directs, amongst other things, that the Secretary of the Treasury shall cause to be prepared a "well digested manual, containing the best practical information that can be collected on the growth and manufacture of silk, adapted to the different parts of the union," a copy of which resolution I beg leave herewith to enclose, that its entire object may be the more distinctly seen.

In determining upon the means by which the information aimed at in the clause of the resolution above recited may be obtained, none have occurred so likely to be effectual, as to address a communication to the Governors of the different states and territories, asking their friendly instrumentality and assistance. I have, accordingly, the honour to address myself to your excellency, and to enclose a series of questions that have been drawn up at this department under the branch of the resolution mentioned. In taking this step, it is neither my expect-

ation nor wish to devolve upon your excellency any personal trouble; but a hope is entertained that you may be able to command the means of giving to the questions a direction by which the information which they seek may, in some instances, and to some extent, if not entirely, be obtained; and when contributions are thus obtained from all parts of the Union, it is confidently anticipated that the aggregate of information will be neither small in amount nor inconsiderable in value. Several copies of the questions are enclosed, that you may be enabled to transmit them to as many of the enlightened and patriotic citizens of ———, whose practical pursuits, or the course of whose investigations, may have created ability to answer them, as circumstances may allow; and although the fullest answers that may be practicable would always be desirable, it is hoped that no individual will abstain from answering, because his answers could not be full, or meet all the questions propounded.

The only apology I have to offer for asking the good offices of your excellency upon this occasion is, that it is one of public concern; and that whatever information and light may be shed upon the subject of the resolution of the house, by the course of inquiry adopted, will, in the end, be made known to our common country, for the common benefit.

Permit me, in conclusion, to add, that whatever returns I may be favoured with to this letter, will be in season if they reach the department by the 1st December, a limit of time the furthest that can be given, but which is rather fixed upon, as it may increase the opportunities of making the returns acceptable.

I have the honour to remain,

With great respect, your obed't serv't,

RICHARD RUSH.

His Excellency ———, Governor ———.

QUERIES.

The House of Representatives having, at the last session of Congress, passed a resolution, "that the secretary of the treasury cause to be prepared a well digested manual, containing the best practical information that can be collected, on the growth and manufacture of silk adapted to the different parts of the Union, containing such facts and observations in relation to the growth and manufacture of silk in other countries, as may be useful, and that the same be laid before Congress at the commencement of their next session:" the following queries have been prepared, with a view to aid in obtaining, in part, the means of complying with the resolution. Answers to all, or any of them, are respectfully invited, from such enlightened and patriotic citizens as may have it in their power to furnish them. The answers to be transmitted to the Secretary of the Treasury, on or before the 1st of December.

1. What efforts have been made in the state of ———, if any, and at what periods of time, to raise silk?

2. Whence was the silk worm obtained? Is this insect a native of ———, and if so, in what respects does it differ, if any, from the Oriental or foreign silk worm? Are there any varieties of this insect known in ———, please to describe whatever kinds there may be?

3. Does the mulberry flourish in ——— in its different varieties; what soil suits it best; is the white mulberry an indigenous tree? If not, has it been found to thrive as well in the United States as the red and black mulberry? Which of the latter is indigenous, or, are both?

4. Does the silk worm feed as well upon the red and black mulberry as upon the white? Is there any other leaf or plant known in this country upon which it does feed; and, above all, will it yield silk of equal quality when fed upon any other leaf or food, as upon that of the white mulberry?

5. Be pleased to state the best methods of raising and multiplying the several species of the mulberry tree; how it is propagated; how old it should be before transplanting; what particular modes of treating it are required; the age at which it should begin to furnish food for the worm; whence trees or cuttings can be obtained for transplantation; the price per hundred; how many trees should be planted on an acre; and would it, or would it not, be profitable to cultivate the mulberry, for the purpose of feeding the worm in the form of a bush or shrub?

6. What quantity of raw silk ought to be produced from an acre of full grown mulberry trees, planted and reared in the best manner? How many silk worms are required to produce a pound of raw silk? What quantity of raw silk can be produced from an acre of mulberry trees by other modes of cultivation than the full grown tree?

7. Be pleased to state, as much in detail as may be in your power, the methods of treating the silk worm with a view to raising the best silk, and in the greatest quantity; embracing particularly the habits of the insect, as to appetite, cleanliness, position, or accommodations, whilst the cocoon is forming; the species of twig or branch on which it is best that it should be spun; temperature, and degree of light most favourable to the insect, and all other circumstances which may affect its health and strength, and its capacity to yield a perfect cocoon; also, a description of the process of forming the silk by the insect until the cocoon is completed; the best modes of treating the cocoon, and of obtaining the silk; and how far the labour of females, children and old men, may be usefully employed in the culture of silk?

8. What difference, if any, exists between the Chinese and Italian or Spanish worm; which country is reputed to produce the best insect, and what particular part of the country?

9. Does the climate of ——— admit of raising silk with full advantage in the open air; or is it best the insect should always be housed; if the latter, what size and form of building or apartment is best fitted to its operations? If the silk be raised in the open air, is any shelter, and of what kind, required, as well from the rays of the sun as from wet, and to protect the insects from birds and other animals that prey upon them?

10. Is there reason to suppose that, in some parts of the United States, the climate may admit of more than one crop of silk being raised from the silk worm in the course of the year, as in Asia? How will this inquiry apply to ———?

11. Have lightning and thunder been found to affect the silk worm in our climate; and how far, if at all, has any insect of our climate, or animal of any kind, been found to prey upon, or injure it, beyond those that are known to do so in other climates?

12. What is the greatest quantity of silk that has been raised in the state of ——— in any one year; into what articles or forms has it been manufactured; and have the manufactured articles been consumed at home or sent abroad—and where; where has the raw silk been sent when not wrought into manufactures?

13. What prices have the raw or manufactured silks commanded in the market of the United States, as compared with similar articles imported from Europe, China, or the East Indies? What progress has been made in the drawing, spinning, and twisting of sewing silk in any part of ———? Have its strength and evenness been equal to the French, English, or Italian sewing silk? How have we succeeded in the colouring or dyeing? All information on this head will be acceptable.

14. Will you be pleased to describe, with as much particularity as may be, the machinery most approved for winding off the silk from the coco for forming it into organzine or thrown silk; and

We all have our weak and irritable moments—we may experience many changes of temper and feeling; but let us beware of betraying such variations in our outward conduct, if we value the good temper and respect of our children; for these we have no right to expect on their part, without consistency on ours.

If a fault be glaring, it must be seriously taken up; but in the management of the temper, especially in early childhood, much may be effected by a system of prevention. A judicious attendant may avert many an impending naughty fit, by change of object, gentle amusement, and redoubled care to put no temptation in the way, if she observe any of her little ones weary, uncomfortable or irritable. This, for instance, will generally be the case with children when they first awake. They should, therefore, then be treated with more than common tenderness; never roused from sleep suddenly or violently; nor exposed to any little trials, till they have had time thoroughly to recover themselves. It is scarcely necessary to add, how peculiarly this tender consideration is required, not only in illness, but under the various lesser indispositions so frequent in infancy.

Children ought not to be, unnecessarily, thwarted in their objects; which, at a very early age, they pursue with eagerness. Let them, if possible, complete their projects without interruption. A child, for example, before he can speak, is trotting after a ball; the nurse snatches him up at the moment, to be washed and dressed, and the poor child throws himself into a violent passion. Whereas, had she first entered into his views, kindly assisted him in gaining his object, and then gently taken him up, this trial would have been spared, and his temper uninjured.

We should avoid keeping children in suspense, which is often done from a kind motive, though with a very ill effect. If a child ask his nurse for a cake, and she can give it him, let her tell him so at once, and assure him that he shall have it; but, should she be unable to grant his request, or know it would be improper for him, do not let her hesitate; do not let her say, "I will think of it, we shall see," but kindly and decidedly refuse him.

If he sees his mother going out, and petition to accompany her, it will be better she should say "No," or "Yes," at once, for he will receive with ease an immediate, but kind refusal; when, probably, he would cry bitterly at a denial, after his expectations had been raised by suspense.

When a child is to go to bed, we ought not to fret him for the last half hour, by saying every few minutes, "I shall soon send you to bed—Now, my dear, it is time to go—Now, I hope you will go;" but let him be told that, at such a time, he is to go to bed, and when that time arrives, no common excuse should prevent it.

We ought also to be guarded against attaching too much importance to trifles; from this mistake, many an useless combat arises in most nurseries. How often have I observed a nurse more disturbed, and a child more alarmed and fretted, at a torn or dirty frock, than at a breach of truth or a want of generosity! Here the lesser good is preferred to the greater, and the primary object of education forgotten.*

By such measures as have been recommended,

* It is much to be regretted that dress is thus often made the subject of dispute and irritation. Personal cleanliness is indeed indispensable; and children, whether it tease them or not, must be thoroughly washed. But their clothes should be so contrived as not to interfere with their freedom and enjoyment or to require any great degree of attention. It is desirable to keep them as neat as the case admits of; but, to this, a nurse must take care that neither her own temper, nor their's is sacrificed.

accompanied by a quick sympathy with the peculiar characters, and peculiar infirmities of children, much may be done towards forming among them a habit of good temper. But, such is the irritability both of mental and bodily constitution in childhood, that, with our best efforts, we must not expect unvarying success.

From some hidden cause, generally to be traced to their bodily state, many children, perhaps all occasionally, are prone to a certain fretfulness or irritability, which will baffle every attempt to overcome it, and which, therefore, is rather to be borne with than opposed—never to be humoured, but to be received with unmoved serenity and patience. In such cases, there appears to be no other method of proceeding. This, indeed, calls for great patience; but, without great patience, who can perform the duties required towards children?

SPORTING OLIO.



UNION COURSE RACES, L. I.

On Monday, October 3, 1826, at 1 o'clock the races on the Union Course commenced, when the following horses started for the Association's purse of \$500, four mile heats; Mr. Stevens' 4 years old sorrel mare Janet, carrying 101 lbs.; Mr. Laird's 4 years old bay horse American Boy, 104 lbs., and Mr. Potter's 6 years old grey horse Marktime, 121 lbs. Betting rather in favour of American Boy, though in some instances 2 to 1 was offered on the mare against field. At the hour appointed the horses all started in fine style, Marktime taking the inner track, American Boy next, and Janet outside. American Boy came in ahead on the first mile, followed closely in order by Janet and Marktime. On the second mile Janet passed American Boy, and continuing to gain gradually during the remainder of the heat, came in about 25 rods ahead, Marktime second, and American Boy last. This heat was run in 7 minutes and 48 seconds.

During the interval previous to the second heat, 2 to 1 was offered on Janet, but few takers were found. At the proper time the horses were called up, and Janet and American Boy only were led forward, Marktime being withdrawn. At the signal they again started, Janet taking the lead, which she maintained, without being in the least pushed by her opponent, or driven to the top of her speed one inch in the whole four miles. At no one time during this heat was American Boy able to come near the mare till the latter part of the fourth mile, when he was suffered to approach within respectful distance; but then, as soon as Janet was let out by her rider, she immediately ran away from him, and won the race with ease.

Janet has proved herself a first rate courser, and will make good the place of Eclipse. We understand she is a Sir Archy colt.

Trotting course.—The silver plate of the New York Trotting Club, was trotted for in harness, two mile heats, at 11 o'clock, by Trouble, Screws, Tom Thumb, and Lady Pluck, and won by Trouble in two heats. First heat, 5 minutes 27 seconds; second, 5, 31.

At 4 o'clock in the afternoon, Betsey Baker, Buckskin, Shakespeare, and Rob Roy trotted for a sweepstakes of \$100, three mile heats. Betsey Baker gained the purse, by taking the first and third heats. Shakespeare won the second heat. First heat, 8 minutes 21 seconds; second, 8, 30; third, 8, 19.

Tuesday.—The purse was run for by the following horses, 3 miles and repeat: Mr. Van Mater's horse Flagelator, Mr. Badger's horse Hazard, Mr. Potter's horse Fairfax, and Mr. Laird's horse Lance. The latter won with ease—the first heat in 5 min. 56 sec.; second heat 6 min. 1 sec.

Wednesday.—The purse for the two mile heats, was taken by Mr. Badger's horse Trumpeter. The first heat was won by Mr. Stevens' horse Lalla Rookh. Time of running: 1st heat, 3 52; 2d. 3 54; 3d. 3 51.

Thursday the races on this course terminated. The purse was \$200, two mile heats, and was contested for by the following horses—Mr. Badger's 3 years old bay horse Trumpeter, carrying 90 lbs.; Mr. Stevens' three years old sorrel filly Lalla Rookh, 87 lbs.; Mr. Potter's four years old grey horse Marktime, 104 lbs.; Mr. Laird's four years old sorrel filly Transport, 101 lbs.; and Mr. Tredwell's four years old sorrel mare Angelica, 101 lbs. From the number of horses in the field a more interesting race was anticipated than had been seen the two days previous, nor were the expectations of the company disappointed. At 1 o'clock they set off, Marktime apparently the favourite, but Lalla Rookh took the lead on the first quarter, came in ahead the first mile, with Transport, Marktime, Angelica and Trumpeter, in order, close upon one another; after passing the judges' stand on the second mile, Marktime and Trumpeter made a push to pass the mare, but were unable to effect it, Lalla Rookh coming in about a length and a half ahead, and gained the first heat. The time of running this heat was 3 minutes and 50 seconds.

For the second heat four horses only were brought to the stand, Angelica being withdrawn. They all started again in good manner. Trumpeter took the lead from Lalla Rookh on the last quarter of the first mile, passed the judges' box, a half a length ahead and gained the heat by about a length and a half, Marktime following close at their heels. Transport was distanced. Time 3 minutes, 54 seconds.

Great interest was now manifested, and betting on Marktime was now offered for the next heat, and for the purse, calculating that if he gained the third heat, he could easily take the fourth on account of his bottom. In this heat there was another beautiful and even start, Trumpeter perhaps rather first, Marktime passed him on the back of the course, won the first mile by a length and a half but could not maintain his ground, Trumpeter passing him on the first quarter of the second mile and winning the purse by about a length. Lalla Rookh was not able to contend this heat sharply with the horses, but saved her distance. Time 3 min. 54 sec.

At 4 o'clock in the afternoon a scrub was run for \$50, one mile and repeat. Five horses entered. The favourites at starting were Fox and Jack on-the-Green. The running was very fine, the horses appearing so well matched that it was difficult after the start to make any choice. The first heat was gained by Fox, in one minute and 52 seconds, closely pursued by all the others in a body as it were. The second heat was also sharply contested, and taken by Jack-on-the-Green, in one minute 56 sec. The same horse took the third heat in one minute 57 seconds. [N. Y. E. Post.]

RACES IN VIRGINIA.

At New Market on Tuesday last.

On the Tree Hill course, Richmond, to commence on the third Wednesday in October, to continue four days. The second day, 4 miles, purse \$1,000.

At New Hope, to commence on the 14th November, to continue 4 days.

Boydton races to commence on the 29th November, and continue 4 days.

Bellfield races to commence on Wednesday 8th November, and to continue 3 days.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 13, 1826.

✂ CURWEN in reply to Columella, will appear in our next.

✂ AMERICAN ECLIPSE, coming to Maryland.—It gives us great pleasure to hear that a spirit for the improvement of our horses in Maryland has been awakened in a degree that will justify the owners of this celebrated stallion, in sending him to Baltimore for a few weeks on his way to Virginia, and that he will probably be here by the time that the beautiful Bussorah Arabian leaves this vicinity.

It would be superfluous to say any thing here in praise of Eclipse's performances on the turf. They are universally known, and have been the theme of admiration in Europe as well as in America. But it is not as a racer that he is so valuable to the public; but as a successful stallion of great muscle, bone, and bottom, with the faculty of transmitting his fine qualities to his foals, as has been proved by many in New York and elsewhere. It is for one of his not three years old, that \$1000 have been refused in Maryland; and we have reason to believe that for Eclipse himself, at this day, \$15,000 might readily be had, and that less than \$20,000 would not get him.

We are of opinion that Eclipse derives his great excellence on the side of his dam, than which no blood can be better.

He was sired by Duroc; his dam Miller's Damsel by Messenger; his grandam, the English mare Pot8os, imported in 1795, then three years old, by William Constable, Esq., and bred by Lord Grosvenor, sired by Pot8o's, and Pot8o's by the celebrated horse "ECLIPSE;" his great grandam by Gimcrack, Gimcrack by Cripple, and Cripple by the Arabian of Lord Godolphin.

✂ For a particular history of the English Eclipse, ancestor of the American, his namesake, the reader is referred to numbers 2 and 3 of this volume of the American Farmer.

✂ Those disposed to send Mares to Eclipse will please leave their names at the office of the American Farmer, or with Capt. Jesse H. Willis—as the time of his remaining here will be but short, and the number of Mares limited.

✂ We have not been able to discover our correspondent who wrote the communication about the cheapness and advantages of Maryland farms—another correspondent enquires—"can you point out 100 to 200 acres of naturally good land, well watered, not too many rocks and stones, within 1½ miles of a turnpike road, a western or northwestern direction from Baltimore, not exceeding 15 miles, to be had at \$5 per acre.

✂ NEW MEDICAL WORK.—An edition of Doctor Gregory's Elements of the Theory and Practice of Physic is in the course of republication at Philadelphia, and will be enriched with valuable and extensive additions, adapted to the practice of this country, by Professor Potter, of Baltimore, and Doctor Samuel Colhoun, of Philadelphia. We understand the system of Gregory possesses great advantages over those of Thomas and Good. It embraces clear and comprehensive views of the principles of the science, in which the former is defective, and it is free from the detail of Nosology, which encumbers and obscures the merit as well as injures the practical usefulness of the latter.

With the facts which are useful to the practitioner in this country, given by the above gentlemen, as also those of note and authority in the science, as far as they can be embodied in an elementary work, the system of Dr. Gregory will, it is conceived, be

a most valuable depository of knowledge, and be useful to the schools of this country, as well as to practitioners, who want in the daily routine of their business a concise and clear view of useful results, applicable to cases as they arise. The improvements of this country, and the facts and views already accumulated by its most respectable authorities, will be given as far as the limits of the work will allow, and will, it is hoped, add much to its value.

FRUIT TREES, GRAPES, &c.

The subscriber, proprietor of the Linnæan Botanic Garden and Nurseries, at Flushing, near New York, offers to furnish the public with such Trees and Plants as they may be in want of. The collection of Fruit Trees of all the various kinds, and also of Ornamental Trees, Shrubs and Plants, is by far the most extensive and valuable in America.

In addition to the numerous acquisitions of former years, he now offers to the public above 500 new varieties of most choice fruits, which are not in possession of any other establishment in this country, all of which are announced in the catalogue for 1826. The assortment of Grapes consists of above 250 kinds, and comprises the finest Wine and Table Grapes of France, Germany, Italy and the Crimea.

The Proprietor having acquired extensive information on the subject from actual observation and experience, is enabled to make such selections as may be suitable to any particular locality; and where such selections are left to him, he will send such as cannot fail to succeed. He also offers them, in assortments of one dozen each, at the following prices:

For the first assortment the price will be eight dollars; for the second six dollars, and for the third four and a half dollars:

Persons who order Grapes will be furnished with directions for their culture.

His collection of Roses exceeds 500 varieties, and of Green House Plants he has above 2000 species, comprising 20,000 Pots, among which are all those known as most beautiful and interesting. Catalogues may be obtained gratis of the different agents throughout the Union, and orders through them, or by mail, (post paid) will meet prompt attention.

WILLIAM PRINCE,

Cor. Mem. of the Linnæan Society of Paris, of the Horticultural Society of London, and of the Imperial Society of the Georgioli at Florence, &c. &c.

✂ G. F. MILLER, at the office of the American Farmer, will receive and transmit orders for any thing for sale at the above establishment. Oct. 13.

FOR SALE.

A full blood Mare, got by old "Eclipse Herod" out of the Dairy Maid; she was got by Holmes' imported horse Bedford, and out of General Ridgely's mare Racket.—She is 11 years old last spring, good size, sorrel, ball face and cropped ears, and has been a winner of more races than any nag ever owned or raised in Maryland.

Also, the full blood Horse "Ottrington," raised by Richard Caton, Esq. got by Top Gallant, who was got by "Diomed," the sire of "Sir Archy," and out of a full blood Virginia Mare. Ottrington is a blood bay, 15½ hands high, 8 years old, star in his forehead, and his two hind legs a little white about the connection with the hoof. Ottrington has proved himself a runner, but at an early age struck lame, and consequently is only valuable as a covering horse. His stock is celebrated as saddle nags. To save trouble, the price of the Mare is \$300; Ottrington, \$400.

Apply to JESSE H. WILLIS, Oct. 13. Baltimore.

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On the use of Lime in Agriculture—Extracts from late English papers, shewing the State of Trade, &c. in England—On the Culture of the Potato—Sheep—Circular from the Secretary of the Treasury, containing inquiries on the culture of Silk—Wines and Grapes—Large Cucumber—Cheese Making—Poetry—Temper—Union Course Races, Long Island—Races in Virginia—Editorial—New Medical Work.

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Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	4 00		4 50	scarc
Oats,	—	50			
Beans, White,	—	1 50	1 70	1 87	
HEMP, Russia, clean, .	ton	215			
Do. Country	—	120	150		
HOPS, 1st sort,	lb.	12		25	
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	7			
Bar	—	7½	8		
LEATHER, Soal, best,	—	22	23	32	
MOLASSES, sugar-house	gal.	46	50	62½	75
Havana, 1st qual. . .	—	30		37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, . .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . . .	—	1 75			
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter . .	—	70	75	88	
PORK, Baltimore Mess,	bbl.	11 00	11 50		
do. Prime,	—	8 50			
PLASTER, cargo price,	ton.	3 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	2½	3	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, . .	—	5½	7½	10	12
WHISKEY, 1st proof, . .	gal.	32	34	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	25		50	
SUGARS, Havana White,	c.lb.	12 50	13 50	14	15
do. Brown,	—	9 50	10 00		
Louisiana,	—	8 75	9 75	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves,	—	70		1 00	
Ginger, Ground,	—	7	12	12	18
Pepper,	—	16½	17	25	
SALT, St. Ubes,	bush	43		75	
Liverpool ground . . .	—	46	47	78	
SHOT, Balt. all sizes, .	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Claret,	doz.	4	8	5 00	8 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	27		wash'd on sheep's back & free from tags.
Common, Country, . .	—	18	22		
Skinners' or Pulled, . .	—	20	25		

Printed every Friday, at \$5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOR, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

CURWEN IN REPLY TO COLUMELLA REVIVED—No. 1.

MR. EDITOR,

I wish in your supremacy you could cause a statute of limitation, or any other statute adapted to the case, to be enacted, which shall confine your correspondents within a definite term, and defend your "FRIENDS," WHOSE OPINIONS YOU SOLICIT, from the necessity of rejoinder eight months after the discussion had ceased, when the points of dispute had passed from the recollection of your readers, and in some cases it would appear, from the parties who had commenced the attack.

Columella, I have no doubt, honestly desires to arrive at truth. I have no disposition to accuse him of intention to take any unfair advantage, nor to omit that which, he conceives essential to the case. He calls in question the authority of Luccock, who is received by Parry, Somerville, McKenzie, Lawrence, Parkinson, the Highland Society, the Bath and West of England Society, and by the BRITISH AGRICULTURAL BOARD; and I may add, by every breeder and writer of note whom I met abroad.

He tells us that Luccock was a *wool stapler*, not a breeder. The wool staplers are the persons upon whose judgment the decisions at the British shows, upon the quality of the fleece, mainly depend. His being a *dealer in wool*, whose daily pursuits and support are intimately connected with wool, certainly does not detract from his interest in the discussion, his means of information, nor the probability of his telling the truth.

And I would ask, are not his facts in connection with wool, to be received with quite as much reliance in their force, as the bare assertions of an anonymous writer, who gathers the notions of purchasers of sheep at a vendue, whose names are withheld as well as his own?

Columella asserts that Luccock is Curwen's chief authority on *yolk*. This I deny. Curwen gave Parry—Communications to the British Board of Agriculture, vol. 5, (1807) pages 342, 343, 344, 355; vol. 5, (1808) page 169—Appendix to the General Report of Scotland, (1814) page 183—Complete Farmer, quarto—and Churchman, a Pennsylvania breeder, (American Farmer, vol. 7, p. 341) all showing the importance of *yolk*.

Columella remarks—"But to return to Mr. Luccock,—let us hear what he says of his own experience in Merino sheep, the only race in which an exuberance of *yolk* is found," page 85. "I have not seen," says he, "any of those animals or their produce, which are said to AFFORD A STAPLE EQUALLY FINE FROM EVERY PART OF THEIR BODY; but conjecture that if this breed were minutely examined, it would appear that the *yolk* is produced in equal quantities in every part of the carcass."

Upon this, and this only, with the "exuberance" of fancy, which has discovered analogy between the natural covering on "sailors' legs," and wool upon a sheep's back, Columella imagines that "Luccock had never seen a Merino, or even a mixed blood of that race."

I will not ejaculate, "admirable discovery!" exquisite fancy! but merely take Luccock's words, and Columella's conclusion.

The "wool stapler" says, page 85—"I have not yet seen any of those animals, or their produce, which are said to afford A STAPLE EQUALLY FINE, FROM EVERY PART OF THEIR BODY."

Columella urges—

Ergo, Luccock "HAD NEVER SEEN A MERINO, OR EVEN A MIXED BLOOD OF THAT RACE."

Has Columella ever seen sheep, which afford a staple EQUALLY FINE FROM EVERY PART OF their bodies?

No. 31.—VOL. 8.

If he have not, "by parity of reasoning," HE cannot have seen a MERINO SHEEP.

Luccock had said—"The celebrated breeds of BERRY, of CASTILE, AND OF PERSIA, we are INFORMED, furnish the most copious supply of *yolk*, and at the same time yield those valuable fleeces, which are eagerly sought after by the manufacturers of the countries where they are shorn." * * *

Thus the inference, that he referred to the Merino breed, founded upon Columella's opinion, that none other yielded an exuberance of *yolk*, is groundless.

But if Luccock had said, that he had never seen a Merino sheep, with wool equally fine throughout every part of its body, what would it prove? Not that he had not seen Merino sheep, but that he had heard the idle tales of Merino breeders, ascribing to their favourite race, excellence, which the wool stapler had not discovered in his pursuit of truth.

Will Columella ridicule the British Board of Agriculture, telling us "that the FINEST FLEECES, have usually THE GREATEST QUANTITY OF *YOLK*?"

The Bath Society, contending, "however handsome the shape, however fine the wool, reject him, if he have not a thick coat, in which there is PLENTY OF *YOLK*?"

The compilers of the General Report of Scotland, saying that *YOLK* IS "NECESSARY TO THE GROWTH OF FINE WOOL?"

The "Complete Farmer," declaring that "*yolk* renders wool SOFT, PLIABLE, AND IN PROPER CONDITION?"

Mr. Churchman, with a flock of a thousand ewes, urging that "the FLEECES SHOULD BE WELL SUPPLIED WITH *YOLK*?"

Shepherd, an English breeder, asserting that "*YOLK* protects the sheep from the injuries of climate, and is found in mixed breeds, in proportion to their approximation to the pure Spanish?"

Mr. Roberts, the President of the Pennsylvania Agricultural Society, and

Baron Schulz, of Sweden, and Sir John Sebright, in his letter to the President of the Royal Society, supporting these opinions in the most decided terms?

Lawrence, a celebrated writer, ascribing the admirable defence of Spanish sheep, not only to the wool covering the very face and legs, but to "the great quantity of *yolk*?"

It is idle to object that the opportunities of the English breeders were small.

If Columella require authority to shew, that Parry and Somerville are not objects for ridicule—that they are not ignorant of the subject, upon which he would fain make it appear, that all men, who agree not with him, are "speculative," "unskilful," or absurd, I would refer him to the Bath papers, complimenting Lord Somerville and Dr. Parry, ascribing to them "FAME UNRIVALLED" in their pursuit.

I am sorry to rob this agreeable writer, of any part of the interest which his lucubrations cannot fail to beget. But as he began in the last year amiably to chide Mr. Powell for "errors" in judgment, I am sure, he will forgive me for thinking, that he is in error as to fact, when ascribing to Luccock, that which he did not say.

The wool stapler, in giving the practice in the northern parts of the kingdom, and on the hills of Scotland, observes, "some of the breeds of sheep produce it, (*yolk*), in such small quantities as to render it unsafe for the farmer to expose his flocks to the severity of the winter quarter, unless he furnish them with an artificial covering of grease, mingled with tar, in order, as HE SAYS" (i. e. the farmer,) "to keep them warm."

Columella's corollary, that therefore the "chemico-physiologists" of Scotland accuse Nature of neglecting her duty, is, I apprehend, founded in conception of that which had not been said.

Without chemico-physiological knowledge, or great depth of research, a man may be satisfied, that some breeds of the various kinds which are found on the mountains of Scotland, may have inherited through their ancestors defects in constitution and fleece, imposed by the artificial arrangements of man, or created by opposite circumstances in different climes.

I would inquire whether if Columella were translated to the mountains of Scotland, he would not covet some "noble fellow's tarry trowsers," when condemned to the use of the Highlander's kilt, however ample for the protection of the vigorous loins of a Scotch mountaineer.

What would be thought of a breeder of horses, who should expose his whole stud to the rigors of winter, when he required from them the exhibition of the best properties of their race, although he should know that our northern savages incur their steeds to every species of hardship, and frequently to want of food.

I hope as Mr. Powell's "public spirited" teacher has quoted a Latin phrase, I may be forgiven in opposing the grave opinion of Columella the ancient, to the "speculative" illustrations of his playful namesake.

"Sæpius ejus lana diducenda, vinoque et oleo insuccanda, nonnunquam etiam tota est eluenda, si diei permittit apricitas idque ter anno fieri sat est."

"Nec dubium est quin etiam ob eam rem lana quoque mollior atque prolixior renascatur." (Columell. vii. 4.)

(Communications to British Board of Agriculture, vol. 5, p. 517.)

Powellon, Sept. 30, 1826.

CURWEN.

(From the American Farmer, vol. 7, Dec 30, 1825.)

"Sir,—I have observed some remarks in your useful paper, on the different breeds of sheep, from the pen of that very able and public spirited improver of stock, Mr. Powell, which I am led to notice on account of some errors into which he has been inadvertently led; and which, if not corrected, might mislead those who are about to engage in the propagation of that valuable stock. I allude more particularly to Merinoes, as being by far the most valuable race of sheep in this, or any other country.

When this stock was imported into the United States, there were many rules laid down for enabling unwilful persons to judge of their properties, and Mr. Powell may have been led by these to adopt opinions which his own intelligent observation would soon have corrected. For instance—it was remarked by Chancellor Livingston and other writers of that period of inexperience, that the best Merinoes were distinguished by large dewlaps, an exuberance of *yolk*, and a covering of wool over their faces and legs.

Experience has taught those who have paid the slightest attention to the propagation of the animal, that neither of these marks are to be relied on, if indeed they are any guide whatever. The covering of wool on the head and legs is almost peculiar to young sheep; the pendant dewlap is often covered with coarse hairy wool, and the abundance of *yolk* is rarely found, in the best woolled animal; nor is this ingredient, at all necessary, much less "essential," as Mr. Powell supposes, for the "support of the fleece," whether he means by this expression, the preservation of the fleece, or the maintenance of its quality and value. An excessive secretion of *yolk* is probably a disadvantage both to the animal and

* Excess in *yolk*, as in all things, should be avoided. Mr. Powell had observed the finest flocks in France and England, where during some years he had ample opportunities of personal "observation" which have been confirmed by inspection, of various flocks from Georgia to Maine.

presents itself, is the cultivation of live fences. In some parts of Europe, such is the scarcity and high price of timber, that for years past it has not been used for fencing at all; the fields are occasionally enclosed by walls of stone or banks of earth, but by far the greatest proportion of all the enclosures are surrounded by live fences; these are constructed of various shrubs, selected with a view to the situation the fence is to occupy, or the nature of the soil in which it is to grow: hence the sweet briar, (*rosa rubiginosa*) the sloe, (*prunus spinosa*) and the common elder, (*sambucus canadensis*) are, sometimes, cultivated for fences in England and Ireland; and in the south of Europe, and on the islands in the Mediterranean, the bitter aloe, (*aloe spicata*) and the prickly pear, (*cactus opuntia*) are in common use; but of all the shrubs employed for this purpose, the common haw or white thorn of the north of Europe, (*crataegus oxyacantha*) is deservedly the most esteemed in that country.

The quick-set-hedge, as it is termed in England, is constructed in various ways, but the most usual mode is that with a ditch and bank; it is commenced by digging a ditch five or six feet wide and about three feet deep; the earth, as it is removed, is placed upon the side of the ditch where the hedge is to stand, and when it is raised about one foot, the quicks, or young plants, being previously cut down to within three or four inches of the roots, are placed horizontally on the edge of the bank, next to the ditch, at the distance of six or eight inches from each other, and the earth is then piled over them to the depth of two feet, making the depth from the top of the bank to the bottom of the ditch about six feet. This ditch and bank serves the double purpose of protecting both the field and young plants from the intrusion of animals. When the plants become sufficiently large to prevent cattle from passing, the ditch is filled up by ploughing down the side opposite to the hedge, and the space is then tilled. The subsequent treatment of the hedge consists in little else than preventing the plants from mounting up too high, and in conducting the lateral shoots so as to fill up and secure the vacancies between them.

The preference given in Europe to the English white-thorn for hedges, has induced almost every writer on the subject of live fences in this country, to recommend their introduction here, and even William Cobbett, the last man in the world that would be suspected of partialities for *English thorns*, observes, in recommending live fences to the attention of our farmers, that "he knows not how to get the plants, unless he brings them or their seeds from England;" and even the experiments of some of our own countrymen, seem to have been conducted rather with a view to the introduction of a foreign shrub, than the cultivation and improvement of those already inured to our climate.

The *crataegus* or haw-thorn, (so called because it produces a berry or fruit, which, in England, is called a haw, and this term is applicable to the whole genus, for they all produce the haw,) is a genus of plants belonging principally to North America. Nuttall in his *Genera of North American Plants*, enumerates eleven species as indigenous to the U. States, and Amos Eaton, in his *Manual of Botany*, describes eight as belonging to the middle and northern states. It would be singular, indeed, if some of these shrubs, inured, as they are, to the vicissitudes of our climate and soil, should not be found more applicable to our purposes of cultivation, than any that could be introduced from abroad.

The common thorn bush, (*crataegus coccinea*), the yellow berried thorn, (*c. flava*) and the cock's-spur thorn, (*c. crusgalli*) all grow wild upon our pine plains, upon the very spot where they are wanted, and by their shape, their size and their hardiness, afford to the enterprising and enquiring agriculturist, the best and surest evidence of the ul-

timate success of his efforts to cultivate them for the important purpose of live fences.

The seeds of the thorn, if planted immediately after ripening, do not vegetate in less than eighteen or twenty months, and it is necessary, in order to ensure success, at even that period, that they be subjected to a certain process of preparation. For this purpose, the thorn berries or haws, are to be gathered as soon as they are ripe in the fall, mixt with several times their bulk of rich earth, and exposed to the weather in some secure place through the winter; during the ensuing summer, they are to be frequently stirred, and after being exposed another winter to the frost, they will be fit to plant the following spring, which should be done as early as the season will permit. They vegetate immediately, and will be fit to transplant the next season, or they may stand in the nursery two or three years, to suit the convenience of the cultivator.

In preparing the ground for the reception of the hedge, the ditch and bank, as practised in Europe, must be dispensed with altogether, particularly upon the sandy plains; and it is doubtful if the practice will succeed on any soil in the northern states. Such is the severity of our winters, and the transitions from excessive drought to excessive moisture of our summers, that the banks, however well constructed, soon crumble away under the influence of these operations, and the plants, being thrown out of the earth, soon perish for want of sustenance. Prepare the ground, then, where the fence is desired, by simply ploughing four or five furrows, and this is all that is necessary where the soil is in good order; but if it be a light sandy soil, it will be necessary to pass the plough twice or three times back and forward, exactly where it is intended to place the quicks, and the trench or ditch thus made, is to be filled with manure, compost, or swamp muck, or earth from the barn yard will answer the purpose best; when the surface is made smooth and even, draw two parallel lines six inches apart, directly over the manured trench, and having previously prepared the plants by cutting them down to within three inches of the roots, set them on the lines at regular intervals of ten or twelve inches thus:

The spot must now be protected from the intrusion of animals by temporary fences, erected for the purpose, and the plants thus secured, must be kept clean from grass and every thing else which might be supposed to choke or impede their growth. On the third or fourth season they are to be again cut down close to the earth; after which, in the course of two or three years, they become so thick and compact that nothing can pass them. The subsequent treatment consists in nothing more than simply clipping the ends of the twigs, which is best performed with shears made for the purpose, by which the fence is kept in regular and proper shape, and its closeness greatly increased.

This is the whole of the process required, in this country, to obtain an effectual and everlasting protection to our fields, a process extremely simple and perfectly within the means of every farmer, and that, without the expenditure of a single cent in cash.

Mr. Davis, of the town of Saratoga Springs, in the county of Saratoga, is the first, and only person, that I know of, who has attempted the cultivation of live fences from the native thorn in this vicinity; he, during the past and previous season, planted upwards of 2000 in the manner above described. He procured his plants from the woods and fields, where they were growing spontaneously of course; they are of different sizes, and, probably, of different species; they, however, appeared to be doing well, and, although planted on a light sandy soil, without manure of any kind, are apparently luxuriant and healthy.

Mr. D. informs me that he gathered a quantity of the haws and planted them in his garden; they came up at the usual time, but they were all immediately ate off and destroyed by the grub. He took no precaution in preparing the seed, they were planted as soon as they were gathered, and they lay in the earth two winters and one summer, before they showed any signs of vegetating.

It is said, that the seed may be made to vegetate much sooner by placing them in a tub or barrel, and covering them with boiling water, in which they are to remain till perfectly cool. A process somewhat similar certainly succeeds with the seeds of the locust, which otherwise are as long vegetating as those of the thorn.

It has likewise been recommended to immerse the seed for forty-eight hours in a solution of green cow-dung and water, kept at a temperature of 100°; the hint to this process, probably grew out of the fact that those seeds which pass through cattle undigested, vegetate soon after they are dropped. I am not acquainted with the efficacy of either of these experiments, but think they are well worth trying.

I cannot dismiss this subject without expressing my surprise and regret that the farmers (particularly in some parts,) of this country have not yet turned their attention to the cultivation of live fences: they certainly must resort to it, and the sooner they begin the better: they have now, the most of them, sufficient fencing materials at their command for protecting the quicks until they are large enough to protect themselves; but if they delay, a few years will deprive them of these materials, in which case, they must be purchased, and thus an expense incurred that might be dispensed with altogether, if the work be immediately begun.

A man, in a common season, may gather seed enough in one day to plant a large nursery, and if these are properly prepared and planted, the young quicks will be fit for transplanting the third season. Let the farmer begin with his outside fences first, and, if possible, in a field which he intends to till for several years to come; this will obviate the necessity of any additional protecting fence; for, if no animals be permitted to run in the field, an out side fence will be all the protection wanted. At the end of from six to eight years, the plants will have arrived to that state of maturity when no further protection will be needed; this may then be removed to accommodate other places.

Thus by successive planting, say one hundred rods in each year, which will cost the labour of a man two weeks, and that of a team three or four days, he will in five years, with very little other expense, have a farm of one hundred acres completely surrounded by all the necessary materials for an everlasting fence; and in twelve years from the first planting of the seed, at the utmost extent, the persevering farmer will begin to reap the reward of his enterprise and exertions in the full maturity of his first efforts, and each successive year will add another, and another portion to that already perfected, until every lot be securely protected by a fence, as durable as the soil on which it stands.

If we have had discouraging accounts from those who have attempted the cultivation of live fences heretofore, it is because the efforts have been made, rather with a view of seeing what *might* be done than of doing what *must* be done. There is nothing which gives so much efficacy to an experiment as the *necessity* which drives us to the measure. Let the common labouring farmer undertake the rearing of hedges, under a full persuasion of the necessity, and I dare venture to say, we shall hear no more of the want of success. Guided by his own observations and reflections, he will soon be able to select the shrub which nature seems to have designed peculiarly for his purpose, *his own native thorn in preference to every other.* [Saratoga Sentinel]

A NEW AND VALUABLE GRASS.

MR. EDITOR, *Franklin, Missouri, Aug. 20, 1826.*

Sir,—Enclosed are a few seeds of a grass, native of this state, and one which, in my estimation, will more effectually remunerate the cultivator than any other grass now reared in our meadows.

By a motive of mere curiosity, I was induced at first to notice this grass. Its singular mode of producing its seeds excited my attention, and though I was 150 miles from home, I took up a root and carried it to my garden, in which place it has grown about four years. The continued increase of the size of this one plant has, this year, led me to make some experiments of its usefulness, the results of which astonished me, as well as it did others who were present at the time.

On the 6th of August, instant, there were some of my friends on a visit from other states, and several of my neighbours, in the garden admiring the extraordinary beauty and luxuriance of this bunch of grass, when it was proposed that it should be cut and weighed. This was done immediately and the weight was 52 lbs. The weather being fine and dry, it was sunned for four days, and then tied up in a bundle and carried to the house. On the 14th, being seven days after the cutting, it was weighed again, and it then drew 20 lbs.

This bundle of hay, for it was tied up in a straight bundle, is now in view, and the blades reach about 6 feet in length, forming a cylinder of about 5 feet length, equal in diameter at this distance from the root, to what it is at the butt end, and the seed stalks (which are but few,) projecting about 24 feet farther, making the sheaf, altogether, about 8 to 9 feet in length. When growing, the blades of this grass will average something more than 4 feet in length from the stalk, and something more than 1 of an inch in width. On this day, being the fourteenth from the first cutting, I measured the blades which have since grown from the root, and found them to have elongated about 18 inches. This fact induces me to believe that I may get a second crop nearly equal to the first, provided the frost does not commence earlier than usual. The hay is finely scented, having the fragrance of the best cured corn blades.

Since this grass was put up, it has been shewn to many occasional visitors, three or four of whom have stated that they knew the grass, and that it was to be found in the prairies within a few miles of my house. One of these stated explicitly, that a man, whom I myself very well knew, has used this kind of hay for several years, in preference to any other. His reasons for this preference, were to me fully satisfactory. First, because his cattle, being mostly work steers at the salt licks, were fonder of this than they were of any other kind of hay—and, secondly, because he could, in addition to this, procure five times as much of this kind of hay, in one day, as he could procure in the same time, of any other. From this relation, taken as a fact, and from my own observation and knowledge of the grass, I have concluded that it is good.

Let us then see the possible product of one acre, in one year.

The English acre contains 43,560 square feet. The bunch of grass, at the root, was a circle of 2 feet diameter. Suppose 43,560, the number of square feet in an acre, be divided by 4, the contents of a square block whose sides are 2 feet each, the quotient will be 10,890, the number of 4 feet blocks on one acre. This number being multiplied by 52 pounds, the weight of green grass growing on one block, will give 566,280 lbs. the product of one acre in green grass—and if multiplied by 20 lbs., the weight of dry hay, which grew on one block, the product will be 217,800 lbs.

But the ground on which the hay grew, was not a square of 2 feet sides; it was a circle of 2 feet di-

ameter. The contents of a circle, whose diameter is 2 feet, bears to the contents of a square whose sides are two feet, the proportion that 11 does to 14. Therefore $11:14::217,800=277,200$. This would be the product of one acre of dry hay of this kind of grass, supposing each foot of the acre to produce as much as one did of the sample before us—supposing the second crop to be half equal to the first, the greatest possible product of an acre, in one year, would be 415,800 lbs. of dry hay.

This seems so extraordinary, that though it be mathematically possible, yet I cannot believe it to be probable. Let us then make the estimate in a mode which all will agree to be practicable. Say that one fourth of this quantity can *certainly* be raised, by any careful manager, from any good ground. I cannot well doubt that, as this bunch, covering a circle of two feet diameter, has produced 20 lbs. of good hay, it would be practicable for another circle of two feet diameter to produce as much, provided they did not injure the growth of each other by too great proximity.

We will then suppose an acre to be laid off into circles of 2 feet diameter; which would make the number 10,890, and one half of these 5445 only, set, alternately, through the whole acre, the product would be 108,900 lbs.

It seems to me reasonable to conclude, that if the area of 5445 circles of 2 feet diameter, being considerably less than one half the area of an acre, can produce 108,900 lbs. of good dry hay, at one cutting—and if further, the second cutting in the same year, should be equal to but half this quantity, the cultivator of this grass may, to a high degree of probability, if not absolute certainty, get 100,000 pounds of hay for each acre which he shall plant with this grass.

This grass has not been described by any agriculturist whose works I have seen; nor shall I attempt to portray its *botanical insignia*, in the language of this science; but I will say in English, that it bears no seeds earlier than the second or third year after being planted—that the seeds are produced at the end of a long stalk, say one at the end of another to the length of 3 or 4 inches, and at the end of these is a tassel similar to a single spike of the Indian corn tassel—that the seeds are embedded in the stalk about half way between the joints, and at the time of flowering, each one has a short crooked fibre resembling the silk of Indian corn—that the tassel drops off shortly after it has shed its pallen on the silk, and the joints, each containing one seed, which drops off one at a time, as soon as the seeds have been matured, and commencing at the upper end. To give you a complete view of the whole, I have sent you a tassel with the seeds, and if you will take some five or six of the latter and attach them to each other after the manner that the rattles of a snake are joined, you will then have as correct a knowledge of the whole apparatus of fructification as I can give. I believe it would be properly classed with the *Zea Maize*. This grass grows spontaneously on the low grounds of our prairies, not on wet, but on lands rather moist than dry. The bunch which I have in my garden is on a rich sandy loam, rather dry than wet. I would advise the planting of the seeds on a light rich bed, in drills, the seeds placed about six inches apart, and covered about one inch with mould. After they have taken one year's growth they should be transplanted to the place where designed to remain, in squares of two feet distance from plant to plant.

Dean Swift, if I remember right, has observed, that he who shall make two grains of corn, or two blades of grass grow, where but one grew before, will render more service to mankind than all the politicians that ever existed, have done. If this assertion be true, I am of opinion that the American Farmer will be read when the political archives of

our country shall be as little known, as are now, those of the ancient Tadmor of the wilderness.

Respectfully, your obed't serv't,
JOHN HARDEMAN.

J. S. SKINNER, Esq.

LARGE EGG APPLES—AND LARGE CORN.

DEAR SIR, *Georgetown, Oct. 10, 1826.*

Seeing in your paper of last week an account of an egg apple raised by the gardener of the Rev. Mr. Dubois, I have been induced to send you the following:

An egg plant, raised in Mr. Cox's garden, which had been pulled and drying in the sun six or seven weeks, weighed 9 lbs. and measured 284 inches on Saturday last. The gardener says it must have lost two or three pounds in drying, and three or four inches in circumference.

I have now in my hand an ear of corn with 36 rows of corn, (which any person may see by calling on me,) raised by Mr. Cox. I send you a few grains to shew the quality.

Yours, respectfully,
JOHN THRELKELD.

[We earnestly wish to make this autumn, a collection of remarkable ears of corn for General Lafayette; remarkable for size, whether large or small, colour, &c. &c.; each ear will be labelled with the name of the person sending it, or with any other name which such person may choose it should bear amongst the General's collection of American curiosities and rare things.]

SOIL, CLIMATE, AND PRODUCTIONS OF FLORIDA.

J. S. SKINNER, Esq., *Newbern, October 1, 1826.*

Sir,—I have lately made an excursion into Florida, from Newbern by way of Fayetteville, Camden, Society Hill, Columbia, Hanburgh, Augusta, Louisville, Hartford, down the Flint river to Quincy and Tallahassee, and their neighbourhoods, and upon the land granted to Lafayette. Along my route of 700 miles the crops of corn and cotton were very inferior—some of them quite desperate—even upon good soil, owing to a want of rain.

The country along the Flint river is an open piny woods, generally possessing a good range for cattle. I counted in one pen one hundred and forty calves, which looked well. The owner said he had forty or fifty more. They winter themselves in the woods. The country is sickly: the water is impregnated with lime: and the river runs over a bed of lime stone: the water looks blue.

Tallahassee and Quincy are situated in the upper country of Florida, removed from open navigation and fish. The latter place is ten miles south of the northern boundary line of the territory, and about 20 miles east of Appalachicola river, in a hilly country, abounding in springs of excellent water. Tallahassee the capital is 25 miles eastward of Quincy: contains about a dozen framed and as many log houses, with one wing of the state house, composed of bad bricks—two stories high, a flat roof, and occupies the centre of a hill which descends in every direction. So soon as the streets are used, gullies will be formed in them, and they will require a constant repair. Adjoining this place is the land granted to Lafayette, much of which is of a very good quality. Here the land generally is rolling, and the soil of a reddish colour. Lime sinks and ponds are common, and the water is less good than at Quincy, being touched with lime.

About these two places the lands are good, consisting of a greyish sandy, and a reddish loam. I apprehend the soil will wash away. Cotton was as high as my head on horseback. Corn promised 6 or 7 barrels, and cane, 1500 pounds of sugar to the acre, so long as the soil holds good.

The lands hereabouts consist of three sorts: open piny land, like that along the Flint river, level oak and hickory land, and hammock land. This last sort is the best and is very broken, and difficult to clear. The growth upon it is oak, hickory, dogwood, poplar, magnolia, bay, gum, pine, very thickly set with, sometimes, cane. This hammock land is the descending surface from the common level of the country, and is bordered by little streams, resembling ditches, of clear water, running into a creek or river.

About Quincy and Tallahassee it is thought will be healthy. The thermometer ranges at 85. The nights are shorter than with us, who are further from the equator.

Further your deponent sayeth not. A. B.

P. S. I made this season 60 gallons of wine, and 10 gallons of vinegar, from the produce of a single vine which grows in my garden.

Our crops of corn and cotton are very inferior.

HORTICULTURE.

SILK, OF EXCELLENT QUALITY,

From the common American Black Mulberry.

South Union, Jasper Valley, Ky., Sept. 12, 1826.

Respected friend J. S. Skinner—

Along with the "Navigator" I send you 4 skeins of silk from the black mulberry. This is entirely at your disposal. The design of sending this silk, is mostly to find out through the Farmer, if practicable, whether this silk from the common black mulberry of our forests, is not equal, if not superior, in strength, and in its manufacture for sweetness in following the needle, to that imported and said to be produced from the white mulberry. The cultivated genius of an experienced lady's fingers will soon determine this on trial. I have no reference to colours—the purple is dyed with green husks (or shucks,) of the purple corn; the brown with the green twigs of the butternut (white walnut,) tree; the white is the natural colour, and by some more experience may be much improved. The three largest skeins are formed, first of a thread of forty filaments of the worm—two of these spun together make 80 filaments, and these again doubled and twisted make 160 filaments to each thread in each of the larger skeins. The small skein contains the same number of threads in the same length; 40 filaments being spun and then doubled, making 80 filaments to a thread. Besides the filaments, or fibres, composing the threads of the small skein, are as much finer than the fibres of the large skeins as about 4 is less than 6, or 2 less than 3; which is about one-third finer—and this fineness is owing to peculiar skill in the unwinding of the *bulls* (or cocoons.)

Respectfully,

B. S. YOUNGS.

[It may not be considered out of place to append to the foregoing letter the history of our common red mulberry from Michaux. The preceding letter, when illustrated by the specimens of fine silk that accompanied it, may be considered as important, since it goes to shew that fine silk may be had from worms nurtured on the leaves of the native mulberry in our country, we may hitherto have come to a different conclusion, from not having considered that our red mulberry, (*morus rubra*), is indigenous to America very different from the black mulberry of Europe, with which the white mulberry as adapted to the culture of the silk worm, has hitherto been compared, and to which it has been preferred. It is true, that according to Michaux, "the red mulberry has been cultivated for many years in France and England," but it may be not in sufficient abundance to have been fairly tried as a sustenance for worms; or it may be, that the texture of its leaf undergoes as much change as does that of Cuba to-

bacco upon being transported only from that Island to America, or from Maryland to Kentucky, or even the Western to the Eastern Shore of this state. Why not? So the same reason may be given for the impression in our Eastern states, that the red, or as we call it, the black mulberry, will not succeed, for that is the part of the United States where alone a full experiment of silk making has been made; and that it is not, according to the best authority, the native soil and climate of the red mulberry, with the leaves of which Mr. Youngs fed his worms from which such beautiful silk was made. In a word, independently of Mr. Youngs successful experiment, we consider that it has been too soon taken for granted, that our red mulberry, (which differs from and is not more than a third as large as the European black mulberry,) is unfit for the production of silk of the finest quality; but suppose it would not produce such silk, still it will at all events produce silk fine enough for sewing; and even that is an item worthy of the attention of all good housewives.]

RED MULBERRY.

Monœcia tetrandria.—LINN.

Urticæ.—JUSS.

MORUS RUBRA. *M. foliis cordatis, orbiculatis trilobis, æqualiter serratis, scabris; spicis femineis cylindricis.*

The northern extremity of lake Champlain, and the banks of the river Connecticut, which I have assigned as the limits of the tulip tree, may also be assumed as those of the red mulberry. As a temperate climate is favourable to its increase, it is more multiplied farther south; but in the Atlantic states it is proportionally less common than many other trees which still do not constitute the mass of the forests: the sweet gum, the tulip tree, the sassafras, the red beech, and the maples, are far more abundant.

In the lower part of the Southern states this tree is much less frequently seen than at a distance from the sea, where the soil and vegetable productions wear a different character. I have found it most abundant in the states of Ohio, Kentucky and Tennessee, and on the banks of the Wabash, the Illinois and the Missouri; which is attributable to the superior fertility of the soil.

In these regions, and in the upper parts of Pennsylvania and Virginia, the red mulberry often exceeds 60 or 70 feet in height, and 2 feet in diameter. Its leaves are large, sometimes entire, and sometimes divided into two or three lobes, rounded cordiform and denticulated, of a dark green colour, a thick texture and a rough, uneven surface.

The sexes are usually separate, though sometimes they are found upon the same tree. The male flowers form pendulous, cylindrical aments, about an inch in length; the female blossoms are small and scarcely apparent; the fruit is of a deep red colour, an oblong form and an agreeable, acidulous, sugary taste: it is composed by the union of a great number of small berries, each of which contains a minute seed.

The trunk of the red mulberry is covered with a greyish bark, more furrowed than that of the oaks and the hickories. The perfect wood is of a yellowish hue, approaching to lemon colour. The concentric circles are distant and distinct; the wood is, nevertheless, fine-grained and compact, though lighter than that of the white oak. It possesses strength and solidity, and, when perfectly seasoned, it is almost as durable as the locust, to which, by many persons, it is esteemed perfectly equal. At Philadelphia, Baltimore, and in the more southern ports, as much of it as can be procured is employed for the upper and lower parts of the frame of vessels, for the knees, the floor-timbers, and, in preference to every other wood except the locust, for trunnels. But it grows more slowly, requires a richer soil, and is less multiplied than the locust, and it is found in the ship-yards in a smaller por-

portion than any other timber. In South Carolina it is selected for the ribs of the large boats in which the productions of the upper districts of both Carolinas are brought down the Catawba. For posts it is almost as durable and as much esteemed as the locust. Such are its most important uses, which should engage the American proprietors to preserve with care the stocks growing naturally on their estates.

It is a common opinion among shipwrights and carpenters that the wood of the male mulberry is more durable and of a better quality than that of the female. I must be pardoned for considering this opinion as a prejudice till experiments have demonstrated its truth. In America, as well as in Europe, unlearned people fall into the same error concerning the mulberry tree as concerning hemp, of giving the name of male to the productive and of female to the barren plant, so that if a difference is shown to exist, it is the female tree which affords the best timber.

The black mulberry of Europe, which bears a great resemblance to the red mulberry, and whose fruit is three or four times as large, would be a valuable acquisition to the middle, and still more to the western states, where it would flourish in perfection. The fruit of the American species, too, might easily be augmented in size and quantity by careful cultivation; a very sensible improvement is witnessed in trees left standing in cultivated fields.

As the leaves of both these species are thick, rough and hairy while young, they are improper for the nourishment of silk worms, which feed only on the smooth, thin and tender foliage of the white mulberry. On several deserted plantations, fifteen or twenty miles from Savannah, are seen large white mulberries, which were set out a century ago, when attempts were made to introduce the raising of silk worms. Experience quickly detected the error of the calculation: this branch of industry is adapted only to a populous country, where there are hands not required for the cultivation of the earth that may be employed in manufactures so as to afford their products at moderate prices. In the United States this period is still remote; the extensive and scarcely inhabited regions of Upper Louisiana, favoured with a fertile soil and a genial climate, will offer resources to the redundant population of the Atlantic and western states. These regions will probably produce the finest silk, as their soil and climate are peculiarly adapted to the white mulberry.

The red mulberry has been cultivated for many years in France and England, where it succeeds perfectly, and is esteemed for its thick and shady foliage. The excellent properties of its wood should induce the Europeans to propagate it in their forests.

[Michaux's North American Sylva.

LADIES' DEPARTMENT.

FLOWERS.

"Put on your brightest, richest dress,
Wear all your gems, best values of ours!
My fair one comes in her loveliness,
She comes to gather flowers."

[To justify the favourable estimate we always form of the character of man or woman, in whom we observe a fondness for the culture of flowers, it is not necessary that they should have incurred great expense by the importation of exotic plants, or that they should have the means of building costly green houses, in which—

"While earth wears a mantle of snow
There pinks are as fresh and as gay
As the fairest and sweetest that blow
On the beautiful bosom of May."

The taste for flowers and the mild and benevo-

least feelings that usually accompany it, may be as decisively shewn about the windows and doors of a cottage, as in the extended *lawn*s and magnificent green houses of a palace. In passing through New England, no circumstance makes upon the mind a more favourable impression than the universal display of vines and flowers, and shrubbery, about the humblest dwellings. They are justly regarded, of themselves, as a proof of superior intellectual cultivation—such habits always follow, but never go before civilization and moral culture.

Whether used to ornament the dining table, the mantle, the sideboard, the garden walks, or by the ladies (God bless them!) "to bind their floating hair," no ornament is so becoming as *natural flowers*.

On a recent visit to the country we were charmed with the display of flowers, various and brilliant, with which the tables were decorated; and all of us are delighted when we sometimes see the sedate and exemplary city matron mitigating the fatigues of domestic duties by attention to her little nursery of flowers. The existence of such propensity is so invariably associated with pure and amiable domestic affections, that we cannot but desire to contribute the little we can towards a better knowledge of the history and culture of such flowers as are within the reach of all, and by all admired; more particularly the *hyacinth*, *tulip*, *ranunculus*, *anemone*, *auricula*, *cornation*, *pink*, and *polyanthus*. If, in the extracts from books imported for this purpose, our fair readers should find little new, it will prove, what is altogether probable, that we are greater novices than they.

We shall begin with extracts intended by the author to convey a short account or history of the cultivation of flowers first, and afterwards give some of his directions for the practical culture of those above mentioned. These introductory extracts will be concluded in our next.]

(From Maddock's Florist's Directory.)

The *hyacinth* is of the class and order hexandria monogynia; according to Linnæus, it is the *hyacinthus orientalis*; *sive hyacinthus corollis infundibuliformibus semisæfidis, basi ventricosis*; i. e. oriental hyacinth; or hyacinth with funnel shaped corols or petals, cleft half way into six parts, and swelled at the base. The oriental hyacinth, according to Linnæus, is a native of Asia and Africa; it is also called oriental by Dioscorides, who wrote during, or soon after, the reign of Vespasian: Caspar Bauhine refers to a work entitled Besler's Hortus Eystettenensis, the first part of which was published in 1613, the last in 1640, for three double varieties of the oriental hyacinth; but the first double hyacinth known in Holland, was raised from seed, towards the end of the last, or beginning of the present century, by Peter Voorhelm,* one of the earliest and most celebrated Dutch florists, and from which all the fine double varieties we now possess, may be traced through a course of continued cultivation and gradual improvement.

So great was the value of a capital new double hyacinth considered formerly in Holland, that two thousand Dutch florins, amounting to upwards of 150*l*. sterling, was actually given for a single root.†

* Vide the Marquis de St. Simon's Treatise on the Hyacinth, printed at Amsterdam, 1768.

† Vide George Voorhelm's Treatise on the Hyacinth, printed at Haarlem, 1773. So extensive is the cultivation of hyacinths become in Holland, that many acres are occupied by individuals for that purpose only, and several hundred thousand roots are annually imported into this country; the prices now, when compared with the same flowers twenty years ago, are very low; this arises from the rapid increase which these roots make: at present there are fewer imported at two guineas per root, than at that time there were at ten guineas per

The word hyacinth is of a very ancient date, and of uncertain derivation.

The *tulip* is of the same class and order as the hyacinth; according to Linnæus, it is the *tulipa gesneriana*; *sive tulipa flore erecto, foliis ovalo-lanceolatis*—i. e. gesnerian tulip; or tulip with an erect flower, and ovate spear-shaped leaves. The tulip, according to Gesner, is a native of Cappadocia, from whence it was introduced into Europe, in the year 1559; it is, however, certain, that the present improved varieties of the tulip have been obtained by art, within the last and present century; and it is chiefly to the exertions of Dutch, French, and Flemish florists, that we are indebted for the perfection to which this flower is at present arrived.

The rage for tulips* was so prevalent in Holland about one hundred and fifty years ago, that it is said, property to the amount of many hundred pounds sterling, was given for a single root; this extraordinary traffic was, however, soon checked by the interference of the legislature, who foresaw the ruinous consequences which must inevitably follow such an infatuation to individuals, and deemed it expedient to enact, that no tulip, or other flower root, should, in future, be sold for any sum exceeding about fifty pounds sterling.† The word tulip is said to be derived from the Turkish word, tulipan, signifying a cap, or head-dress.

The *ranunculus* is of the class and order *polyandria, polygynia*; according to Linnæus, it is the *ranunculus asiaticus*; *sive, ranunculus foliis ternatis biternatisque, foliolis trifidis incisus, caule inferne ramoso*—asiatic ranunculus; or ranunculus with trifoliate and twice trifoliate leaves, whose leaflets are trifid and cut, the stem branching at the bottom.

The asiatic, or as it is more commonly called, the Persian ranunculus, according to Linnæus, is a native of Asia and Mauritania; it is said to have been introduced into Europe from Syria, at the time of the crusades; but in this, as well as other flowers, we find the most considerable improvements made within the last fifty years, both on the continent of Europe, and in England.‡ The word ranunculus

root, and the far greater part now imported do not cost in Holland more than three pence, although the seedling root of many of the same sorts may at first have been worth fifty guineas.

* The perfection in which these flowers are now obtained, is certainly originally owing to foreign cultivators; but so fond are the Dutch of their money, that they forego all English improvements, rather than become purchasers of our new varieties, many of which possess as much merit as any of theirs. A new tulip, to be a favourite in the present day, must possess extraordinary claims upon the attention of the florist: the collection being so very numerous of fine specimens, tends to exclude middling flowers, which forty years ago would have been highly esteemed; but it must be acknowledged that most of our best flowers now in esteem, existed near twenty years ago.

† Many erroneous assertions respecting the prices given for tulips in this country, are in existence; but we may confidently state, that it has seldom occurred that fifty guineas have been given for a single root, and never so much as one hundred. "The intrinsic value of a thing, is just as much as it will bring;" this seems applicable to the value of flowers; the raiser of a new tulip, or other flower, fixes whatever price he pleases on it, which mostly amounts to more than its value, consequently, they are seldom sold in that unique state; when he has propagated it and can bring several roots to market, they are more easily sold at one quarter of the price first asked, and the raiser still preserves a stock of it in his own hands. As it gets more distributed amongst florists, its increase still lowers the price, until it will sell for no more pence than it first sold for in pounds, although its qualities are equal to what they were in the original root.

‡ We have no doubt but the new varieties of this flower, raised within the last fifteen years from seed in the garden at Walworth, are the best kinds now in existence, there being near fifty thousand new seedlings bloomed there annually.

is supposed to be derived from rana, a frog; this derivation probably originated from the known partiality of the ranunculus to a cool and moist situation, while in a state of vegetation, as the plant does not appear to have any resemblance in its shape to that animal.

The *anemone* is of the same class and order as the ranunculus; according to Linnæus, it is the *anemone coronaria*; *sive anemone foliis radicalibus ternato decompositis, involucri folioso*—i. e. crown anemone; or anemone with radical leaves three-decompound, and a leafy involucre.

The anemone, according to Linnæus, is a native of the south-east of Europe; but we are also informed by another author,* that M. Bachelier, a French gentleman, brought it from America to France, in the course of the last century, where he cultivated and very much improved the species, since which it has attained its present degree of perfection, by the continued attention of florists to its culture: the English, however, can claim little or no share in the advancement or improvement of this flower; for all the varieties of double anemones we possess in England, have been imported from Holland, France, or Flanders.† The word anemone is derived from a Greek word, signifying the wind, very applicable to this flower, as its petals are so soft and flexible, and its seed so light and downy, that they are agitated by the most trifling breezes.

The *auricula* is of the class and order *pentandria monogynia*; according to Linnæus, it is the *auricula ursi*; *sive primula foliis serratis glabris*—i. e. bear's ear; or auricula with smooth serrated leaves.

The auricula, according to Linnæus, is a native of the Alps of Switzerland and Styria; it is called *auricula alpina*, by Bauhine, Gesner, &c.; it owes its present improved state, principally to the assiduity and attention of English florists to its culture, who have, from the seed of a flower, imported from Holland about fifty years since, produced, by continued cultivation, almost all the varieties we now can boast. The Dutch and French have extended their improvement of this flower, little or no further than to produce a numerous variety of yellow, brown, and other shaded sorts, greatly inferior to the beautiful kinds raised in this country.

The words *auricula ursi*, signify bear's ear; the plant is so called from a supposed resemblance its leaves have to the ears of that animal.

MISCELLANEOUS.

ON ALUM.

To Printers, Dyers, and Leather Stainers.

(From the New York Statesman.)

Since the new Tariff has been established, alum has been made in this country. As some lots from each manufactory have been pure and good, whilst other lots, from the same factories, have been impure, and calculated to injure the dyer, I have considered it may be advantageous to the manufacturer, as well as to the dyer, to point out its occasional defects, and the mode of testing it, so as to ascertain its injurious impurity.

Alum is a mordant more generally used than any other, it being necessary to the production of every fine colour excepting scarlet. It is a necessary condition to the production of fine colours that alum should be free from every material which have a tendency to sadden the dye. Iron will do this to a greater degree than any other metallic substance,

* Vide G. Voorhelm's Treatise on the Hyacinth.

† This is far from being the case now, there being several fine double anemones raised from seed annually in the garden at Walworth, but they have not been thought worth naming, unless they possessed superior qualities over such as already existed.

ny lots of alum in this market are sufficient-ignated with iron to destroy every fine colour h it may be used, and this has no doubt been s why many of our red flannel dyers have ently produced a dull brick colour, from the rocess, which at other times have obtained illiant reds. In dying of dark colours, such ns, browns, dark drabs, olives, clarets, mo- kc. &c. the presence of a small portion of l not be felt; but in all the finer colours the highly destructive.

rding to Vauquelin's analysis, alum should 30 52 sulphuric acid, 10 50 alumina, 10 40 and 48 50 water of crystallization. Alum is ther from aluminous shistus containing suffi- sulphur to acidify, by roasting or exposure, mina of the shistus, or from sulphuric acid y. When the shistus, or clay, contains iron, n of it will be found in the alum when crys-

The manufacturer to get rid of the iron test the liquor before crystallizing, and pre- it previous to submitting the alum-liquor to ocess. This precautionary measure would lly prevent the existence of iron in alum, r it existed previously in the clay, potash, r vitriol, used in the manufacture.

dyers may discover when alum contains r dissolving a small portion of it, and drop- a few drops of a solution of pure prussiate of which, when iron is present, will cause a ecipitate, pale, when slightly impregnated, nser as the iron is more abundant. As the le of potash of commerce may contain iron, e necessary that our dyers should have a lution; which they can obtain by applying to illiam Partridge, 34 Cliff-street, New York.

HOPSON.

(From the Columbian Telescope, S. C.)

d there be a stronger proof than the follow- graph, of the ample encouragement given domestic manufactures? and yet there are ho keep up the cry that they are languishing want of prohibiting duties, and talk loudly of n influence, and southern opposition. Out ich vile hypocrisy:—

HOME INDUSTRY.

advancement of this country in manufactur- istry, is, perhaps, unexampled in history. In r 1805, the total consumption of cotton, by nufactories of the United States, was a little an one thousand bales.—Now Rhode Island re. In 1812, our woollen factories could not the army with 6,000 blankets. During the r, capital was taken from commerce and in- in manufactures. This was the first impulse. a report made to congress shewed that forty t of dollars capital were invested in cotton ctures, and twelve millions in woollen. In ar we manufactured 90,000 bales of cotton. 8, it was estimated that the whole amount le manufactured in the United States, was o fifty or sixty millions of dollars. It is now d that we manufacture, of all kinds, to the t 250 millions in a year, about 25 millions of are exported, and the rest consumed in the r. The internal or domestic trade of every r, is, perhaps, more permanent and useful e foreign. It is not subject to the fluctua- f the commercial world, which frequently ut and spread desolation around.—The Eng- nalist has been consoling themselves that lustry was as prostrate as theirs. The facts ve have stated do not indicate much depres- [Nat. Advocate.

TRADE OF PETERSBURG.

connection of the following article, from the rg Intelligencer, with the agricultural con-

cerns of a considerable portion of Virginia, and the great number of subscribers to this journal in that state, are our reasons for giving place to what might be deemed too local for a national work.]

EXPORTS OF COTTON

From Petersburg, from the 1st Oct. 1825, to 30th of Sept. 1826—(by account kept at the wharves.)

To Liverpool	12,202 bales
London	715
Greenock	300
Havre	6,569
Bordeaux	35
Bremen	549
Rotterdam	493
Amsterdam	337
	—21,200
New York	7,847
Philadelphia	2,027
Baltimore	1,583
Providence	1,584
Norfolk and Alexandria	854
Boston	327
New London	164
Portland	50
Hartford	10
	—14,446

Total number of bales . . . 35,646

Value . . . \$1,300,000

Quantity of TOBACCO, STEMS and STAVES, exported from the District of Petersburg, from the 1st of October, 1825, to the 30th of September, 1826—(from the Custom-house Books.)

For the quarter commencing 1st Oct. and ending 31st December, 1825.

	hhds. Tobac.	Staves M
To England	3,190	52,608
France	550	4,000
Total	3,540	56,608

For the quarter commencing 1st Jan. and ending 31st March, 1826.

	hhds. Tobac.	hhds. Stems.	Staves M
To England	1,055		11,275
France	250		1,500
Germany	43	682	
Holland	135	112	13,635
Total	1,483	794	26,410

For the quarter commencing 1st of April and ending 30th June, 1826.

	hhds. Tobac.	hhds. Stems.	Staves M
To England	11		
Holland	627		6,500
Germany	178	444	12,000
Total	816	444	18,500

For the quarter commencing 1st July and ending 30th September, 1826.

	hhds. Tobac.	hhds. Stems.	Staves M
To England	1,298		45,900
France			1,100
Holland	318	10	10,600
Germany	283	365	
Total	1,849	375	57,600
Grand total	7,688	1,613	159,118

The above statements, derived from authentic sources, present a clear view of the trade of Petersburg in cotton, tobacco, &c. during the year ending

on the 30th September last. That in relation to the first mentioned article, embraces only the cotton actually shipped, without including the whole brought into this place, which would extend the quantity at least to 40,000 bales. As to its estimated value, the average price of each month has been calculated, and the aggregate as above stated, shews the amount actually paid for it here. What the tobacco trade once was, that of cotton now is to Petersburg; and notwithstanding its present consequence, it is still of growing importance. The extent of production in this vicinity has been doubled within two years; and when we consider the favourable position of our place as a depot, with the advantage of large capital, besides other facilities, with our improved navigation, prospects the most encouraging are held out to us. It is true, that during the summer, business generally has been dull; but the time approaches for a revival, and the quantities of goods from all quarters of the world daily landing at our wharves, give assurance to our country friends, that come when they may, no disappointment in supplying themselves with either dry goods or groceries in this market, on the best terms, need be apprehended.

SPORTING OLIO.



CANTON RACES.

The race of Wednesday, as was anticipated, afforded great pleasure to a very large and respectable concourse of citizens and strangers, who were present to witness the trial of strength between two competitors of acknowledged reputation for speed and bottom.

The first three miles of the first heat was a beautiful specimen of turf-management between the riders, to feel the speed of the adversary-horse, and gave to the anxious spectators a sure presage of the closeness of that struggle for victory which was to mark the fourth round. Southern Eclipse had thus far kept the lead about a length or two, which he maintained until they had ran about a quarter of the fourth mile, when Mark-Time, whose rider had been manœuvring on his flank, made a dash and locked him, and for the residue of the mile, the heads of the two horses might have been covered with a napkin until within a few feet of the winning stand, when Mark-Time shot ahead about six inches and came in the victor.

The second heat was well contested, but not so closely as the first, and was also won by Mark-Time.

It was gratifying to witness the regularity and good order that was preserved on the course, for which too much praise cannot be awarded to the association. [Chronicle.

NEW-MARKET FALL RACES.

The races over this beautiful tract commenced on Tuesday the 10th inst. The first day's race was a sweepstakes, for three years old colts, two mile heats, entrance \$200. There were four entries for this race, but only three started. This race was well contested, and was won at 2 heats, by Dr. Wyche's filly, the last heat by only twelve inches, Pirate having run her to the "eye-lashes." Time, 1st heat, 4 min. 3 1-2 sec.—2d heat, 4 min. 3 sec. The ground was rather heavy, from the previous rain of Saturday, which continued till Sunday morning.

2d Day.—The proprietor's purse, \$500, three mile

heats; four started, to wit: Mr. Johnson's Lafayette; Mr. Wynn's Restless; Mr. Harrison's Lady Le-grange, and Mr. West's Lady Greenville. The ground was very heavy, it having rained incessantly from early in the morning till the hour of starting, and fairly tested the bottom of the nags. Lafayette proved the best, having won the race with apparent ease, at two heats.

3d Day.—The Jockey Club's purse of \$700, was contended for by Mr. Wynn's Ariel, Mr. Johnson's Betsey Archer, and Mr. Bott's Phillis, and was won at two heats by Mr. Wynn's Ariel. The course was excessively heavy.

RECIPES.

TO PREVENT DANGER FROM WET CLOTHES.

Keep if possible in motion, and take care not to go near a fire or into any very warm place, so as to occasion a sudden heat, till some time after you have been able to procure dry clothes.

SPICES.

Cayenne pepper, black pepper, and ginger, may be esteemed the best of spices. Nutmegs, cloves, mace, cinnamon, and allspice, are generally productive of indigestion and headach to weak persons.

TO CLEAN BOOTS AND SHOES IN WINTER, SO AS TO PREVENT SOILING THE CLOTHES OR THE HOUSE.

When the boots or shoes are covered with dirt, take them off, and with the back of a case-knife, or a piece of wood cut thin at the edges like a stationer's paper-knife, scrape the dirt off with the same as clean as possible, which will be very easily done while the boots and shoes are wet. Then, with a small piece of wet sponge or flannel, wipe off the remaining dirt which the pressure of the knife cannot effect. Then place them in a dry room, or at a convenient distance from the fire, for a few hours, and they will take the blacking remarkably well, and bear as fine a polish as they did before wetting. If proper attention is paid to this process the fingers will scarcely be soiled, and much trouble will be saved by the extra brushing required when the dirt is suffered to dry on.

TO PREVENT SHOES FROM TAKING IN WATER.

One pint of drying oil, two ounces of yellow wax, two ounces of turpentine, and half an ounce of Burgundy pitch, melted carefully over a slow fire. If new boots or shoes are rubbed carefully with this mixture, either in the sunshine, or at some distance from the fire, with a sponge or soft brush, and the operation is repeated as often as they become dry, till the leather is fully saturated, they will be impervious to the wet, and will wear much longer, as well as acquiring a softness and pliability that will prevent the leather from ever shrivelling.

Note.—Shoes or boots prepared as above ought not to be worn till perfectly dry and elastic, otherwise their durability would rather be prevented than increased.

THE FARMER

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Oct 20

MATERIA MEDICA OF THE U. STATES,
systematically arranged.—By WM. ZOLLICKOFFER, M. D.
Honorary Member of the Philadelphia Medical Society, and of the Vermont Medical Society; Member of the Medical and Chirurgical Faculty of Maryland; and of the Medical Society of Baltimore.

and of the Lexington Medical Society; Corresponding Member of the Medico-Botanical Society of London; Honorary Member of the Medical Society of Maryland, of the Pittsburg Medical Society, and of the Louisville Society for the promotion of Medical knowledge; Corresponding Member of the Medical Society of the District of Columbia; Honorary Member of the Medical Faculty of Berks county; of the Society of Natural Sciences of St. Gall, Switzerland, and of the Medical Society of the State of Delaware, &c. &c.—Second edition, with emendations, &c.

The utility of a work, in which the indigenous medicinal vegetable productions of the United States, will be exclusively included, and that under a regular systematic form of classification, will, it is presumed, be readily acknowledged by such as feel themselves interested in the improvement of this important branch of the medical literature thereof. Within the limits of the vast extensive territory of our country, an almost innumerable multitude of native plants, have already, through the unwearied and indefatigable exertions of several of the cultivators of botany, been introduced; many of which, have since been ascertained to possess such remediate properties, as justly entitle them to a place in some one of the classes into which the materials of medicine have, with so much propriety, been arranged by the celebrated Murray, Cullen, Moore, and others. The present edition of this *Materia Medica* will include all the indigenous productions of this kind, that have not had a place in a former one. A description of the situation of country in which they generally grow most luxuriantly will be given; their virtues, doses, with the various modes of their administration, will also be noticed; as likewise the diseases in which they have been prescribed successfully. As in the former edition, the artificial arrangement of J. Murray, M. D. in his *Materia Medica*, has been adopted, from its convenience and utility, and as it is supposed to be better known than any other; and in order to facilitate an acquirement of the knowledge of the subject, the most approved authors have been carefully consulted, and each article arranged according to its respective botanical affinity.

The following are the general outlines of the *Materia Medica of the United States*, which will, without any further delay be published. The cause of its not having emanated from the press last fall, may be attributed to the intention that the author had in view, of enlarging it, in order, if possible, to render it more useful and acceptable. The work alluded to will contain 200 pages, octavo, instead of 180, as was formerly contemplated. It will, therefore, be perceived that the matter contained therein has been increased in consequence of the delay.

Chapter 1. Treats of the improvements of the *Materia Medica*.—2. Modus Operandi of Medicines.—3. Classification of Medicines.

Division 1.—Chap. 4. Treats of Narcotics.—5. Antispasmodics.—6. Tonics.—7. Astringents. The four last chapters are included in the first division of general stimulants.

Division 2.—Chap. 8. Treats of Emetics.—9. Cathartics.—10. Emmenagogues.—11. Diuretics.—12. Diaphoretics.—13. Expectorants.—14. Sialagogues.—15. Errhines.—16. Epispastics.—17. Escharotics. The chapters included in the second division are such as treat of local stimulants.

Division 3.—Chap. 18. Treats of Refrigerants. The articles that are introduced in this division belong to the chemical remedies.

Division 4.—Chap. 19. Treats of Demulcents.—20. Anthelmintics. These two last belong to the mechanical remedies. The classes of Antacids, Lithontriptics, Diu-luens, and Emollients, have been omitted, from the circumstance of there not being materials that properly belong to these classes.

The price of the work will be two dollars. Oct. 20.

CONTENTS OF THIS NUMBER.

Curwen in reply to Columella revived, No. 1.—Sheep, Columella accused of Felo de se.—On raising Live Fences from indigenous Thorns.—A new and valuable Grass—Large Egg Apples and Large Corn—Soil, climate and productions of Florida—Silk, of excellent quality, from the common American Black or Red Mulberry.—Description of the Red Mulberry, from Michaux Flowers—On Alum—Home Industry—Trade of Petersburg—Canton Races, near Baltimore. N. Y. Market Fall Races, Racine.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	6	8	9	12
BEES-WAX, Am. yellow	—	30	31		50
COFFEE, Java,	—	16½	17	20	22
Havana,	—	15	16½		30
COTTON, Louisiana, &c.	—	11	13		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	28	30		
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	11			14
CHEESE,	—	8½	9½	12	15
FEATHERS, Live, . . .	—	32		37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed,	—	5 50	6 00		
FLAXSEED,	bush	75	80		
FLOUR, Superfine, city,	bbl.	5 00	5 12	5 25	6 25
Fine,	—	4 37			
Susquehanna, superfi.	—	4 00			
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	60			
white	—	65	68		
Wheat, Family Flour,	—	1	1 10		
do. Lawler, & Red, new	—	95	1		
do. Red, Susque. . .	—	95	98		sales
Rye,	—	65	67		
Barley,	—	80	1 00		
Clover Seed, Red . . .	bush	4 50		5 00	
Ruta Baga Seed, . . .	lb.	87	1 00		
Orchard Grass Seed, .	bush	3 00		3 50	scarce
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed,	—	4 00		4 50	scarce
Oats,	—	50			
Beans, White,	—	1 50	1 70	1 87	
HEMP, Russia, clean, .	ton	215			
Do. Country	—	120	130		
HOPS, 1st sort, 1826 .	lb.	28			
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	7			
Bar	—	7½	8		
LEATHER, Soal, best,	—	22	23	32	
MOLASSES, sugar-house	gal.	46	50	62½	75
Havana, 1st qual. . .	—	30	32	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter .	—	70	75	88	
PORK, Baltimore Mess,	bbl	11 00			
do. Prime,	—	8 00	8 50		
PLASTER, cargo price,	ton.	3 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3	3½	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	8	10	12
WHISKEY, 1st proof, .	gal.	32	33½	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	28		50	
SUGARS, Havana White,	c.lb.	12 50	13 50	14	15
do. Brown,	—	9 50	10 75		
Louisiana,	—	9 25	10 00	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	
Pepper,	—	16½		25	
SALT, St. Ubes,	bush	43		75	
Liverpool ground . .	—	46	47	78	
SHOT, Balt. all sizes, .	clb.	8 50		15	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Claret,	doz.	4	8	5 00	5 25
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	25		wash't
Common, Country, . .	—	18	22		sheep's
Skinnors' or Pulled, .	—	20	25		back P. & from L.

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AGRICULTURE.

CURWEN IN REPLY TO COLUMELLA REVIVED—No. 2.

MR. EDITOR,

I have endeavoured to shew in No. 1, that Columella has failed in his case against one of my authorities, on Merinoes, whom he imagines to have never seen "a Merino, nor even a mixed blood of that race." With the utmost respect for the good intentions of this amusing and spirited writer, I am led to apprehend, that he has not only misconceived the authors to whom I had referred, but that he either has not read, or has misconstrued, the authorities adduced by himself. He cites Sir George M'Kenzie, who "seems (he says,) to admit that a proper composition (smearing,) may be of some use, but adds that it can have very little effect on coarse fleeces," and that for "the finest wool, which is supplied with an oily matter, it is unnecessary"—and he gives Sir Jos. Banks' opinion, that "smearing is required in proportion to the coarseness of the fleeces," but condemns the use of it for fine woolled sheep.

Can M'Kenzie and Banks be brought against Mr. Powel, accused of "error" when asserting—

"The sheep which produce the finest fleeces are not necessarily the best to form a breeding flock. If their constitutions be not good—if their forms be bad, the secretion of yolk, which is essential for the support of the fleece, must be small; the offspring, consequently, will be a degenerate race. Thus in selecting Merinoes, regard should be given to their forms, even in those parts of the country, where the demand for the carcass is so small, as to make mention of little value." (Am. Farmer, vol 7, p. 316.)

From Sir Jos Banks' saying that smearing is required in proportion to the coarseness of the fleeces—from his condemning the use of it for fine woolled sheep, will Columella infer, that therefore fine woolled sheep are deficient in grease or yolk, for which smearing is the substitute, and which his own high authority tells us need not to fine woolled sheep be supplied?

He would not contend that Sir Joseph Banks desired to make the wool coarser, nor would he assert that as a "profound chemico-physiologist" he arraigned "the economy of nature" in proposing smearing to keep the sheep warm.

Wherein then does the President of the Royal Society, Columella's own authority, differ from the wool stapler whom he is brought to confound?

Will he argue, because Sir George M'Kenzie says smearing "can have very little effect on coarse fleeces," and that "for the finest wool, which is supplied with an oily matter, it is unnecessary," that therefore the finest fleeces have not oily matter, i. e. yolk?

M'Kenzie cited Vauquelin to confute him. Columella cites M'Kenzie and confutes himself.

Page 88—"Treatise on the Diseases and Management of Sheep," Sir George M'Kenzie observes—

"Although every respect is due to so good a chemist as M. Vauquelin, he could not have formed his opinion of the effect of yolk on the skin of sheep, but from analogy. As common soap is often used with success in cleansing the skin, and curing cutaneous disorders, analogy would lead us to expect that yolk, being of the same nature, would be beneficial instead of being injurious. And it is observed that fine woolled sheep are less subject to diseases of the skin, than those which carry coarse fleeces; the former being well supplied with yolk and oil, and the latter having drier wool and little yolk."

Here M'Kenzie tells us fine woolled sheep are well supplied with yolk—yet Columella quotes him, after eight months delay, to prove that fine woolled sheep are not well supplied with yolk.

But your correspondent has told us himself, vol. 8,

No. 32.—VOL. 8.

p. 210—"An abundance of yolk was found in Merino fleeces, and Merino fleeces were finer than any others"—and, page 211, he asserts, that "Merino sheep are the only race in which an exuberance of yolk is found."

If Merino sheep have the finest fleeces, and Merino sheep are the only race, in which an exuberance of yolk is found, what is the conclusion?

Columella, would ridicule the "profound chemico-physiologists of Scotland," who he imagines must think, that "nature neglects her duty," as Luccock asserts "some breeds" require smearing on "the hills of Scotland"—whilst he would make her absurd in giving an exuberance of that which he contends is "injurious" to "the most valuable race," fitted, it is said, to every region and clime.

CURWEN.

HOME MARKETS—AGRICULTURAL PRODUCTIONS AND RAW MATERIALS.

(From the Memoirs of the Board of Agriculture of the State of New York.)

A Memoir on the expediency and practicability of improving or creating Home-Markets for the sale of Agricultural Productions and Raw Materials, by the introduction or growth of artisans and manufacturers.—By GEORGE TIBBITS, of Rensselaer county.

Read before the Board of Agriculture of the State of New York, March 8, 1825.

GENTLEMEN,

The Board of Agriculture and agricultural societies were instituted for the purpose of promoting the landed, or farming interest, by such means and measures, as they respectively might deem best adapted to that end.

In general, the measures which have been adopted, have been those of eliciting and disseminating knowledge, as to the best modes of cultivating the land; the best breed of domestic animals; the most approved implements; the most useful seeds, plants and grasses; of encouraging experiments in agricultural processes; the introduction and growth of superior animals, and practice of the best modes of cultivation; with encouragements to manufactures, by the cultivators of the land, or in private families: all tending, however, to encourage the growth of an illimitable quantity of agricultural productions.

I have long been of the opinion, that the most powerful inducement which could have been held out, has been omitted. I mean that of providing prompt and ready markets for these productions. Towards effecting this object, this Board and the county societies, it is believed, may do much.

A ready demand for agricultural productions, at remunerating prices, it is presumed, is the only adequate inducement which can be relied upon, for insuring a careful cultivation of the land, or for increasing the quantity of its produce. It appears almost certain, that no bounties or encouragements, which it is in the power of the state, or of societies to pay directly to the agriculturist, can induce him to make much improvement in his modes of cultivation, or to raise any thing beyond the immediate demands of his family; while any surplus which he may raise, beyond that amount, shall be worth nothing, or where it cannot be sold, or exchanged, upon terms of comparative equality with the profits of the capital and labour employed in the production of all the other articles required for his support.

That capital and labour applied to land, has become less productive, than a like quantity of capital and labour applied to almost any other object, is presumed to be notorious, and conceded. That this, more than any thing else, has paralyzed and discouraged the efforts of the agriculturists, is believed, and which cannot be removed and over-

come by any encouragements and bounties, which it is in the power of the state or societies to pay directly to those concerned in its cultivation. An efficient demand must be provided for the produce of the land, which shall leave to the capitals and persons employed upon it, compensations, which shall be equal, or nearly so, to those employed in producing the other necessities of life, before the desired improvements in the cultivation of land can reasonably be expected; and it is believed to be of much more importance to the farming interests of this country, that this demand should be provided, than to encourage the growth of larger quantities of those articles, which cannot be sold at remunerating prices.

It is held that where particular branches of business are overdone, or do not leave to the capitals and persons employed in them, compensations equal to that of other branches, that the unproductive will be abandoned to the necessary extent, and others taken up, until the compensations to all are equalized.

Although this proposition, as between persons and employments within the same government, or country, may to a certain extent, be true, still it is not so in every case, and rarely, if ever so, when the articles upon which labour and capital are expended, are made in different and distant countries, and exchanged through the medium of external commerce. Articles, upon which but little capital or labour have been expended in one country, are of great price in another, where a knowledge of the art of making them is not understood, or sufficiently extended.

The rude tribes give large quantities of valuable articles, or peltries, for other articles of trifling value, in countries where the art of making them is understood. The channels of intercourse may, moreover, be interrupted by wars; or the wants and policy of different countries may alter, requiring correspondent changes in all the countries concerned in mutually exchanging their labours and products with each other; particular arts, found to be of the first necessity, and difficult to learn or introduce at once, to the required extent, may have been neglected in a country, while articles, the product of those arts, were easily obtained in exchange for other products of the country. The neglect of those arts, and the frequency of those changes and interruptions, deranges the pursuits and labours of the different countries, always affecting those most severely, whose products are least diversified, and confined to the smallest number of articles.

The population of this country is essentially agricultural; or, perhaps, more properly, agricultural and commercial; having none, or but a very small proportion, of that intermediate and manufacturing class, so indispensable in every well arranged community; and we have been led into these pursuits, by causes common to most newly settled countries, between whom, and older manufacturing countries, commercial communications are allowed.

During our colonial state, manufactures were discouraged, and some of them forbidden by the mother country under severe penalties; while labour was invited, and almost exclusively confined to the land, and to a limited commerce. The mother country, in the mean time, compelling us to take her manufactured articles, in exchange for the products of the land, under regulations, fixed by herself, in relation to that exchange.

Soon after the Revolution, the long belligerent state of Europe commenced, and continued, to within a few years. Through the whole course of these long wars, the landed produce of these states sold readily for cash, or was exchanged at fair prices, for the manufactured articles of foreign countries, which gave to our population a further propulsion towards the land, to the neglect of manufactures. These causes, together with the abun-

dance and cheapness of land, gave to this country the agricultural and commercial character which it now sustains; and has deeply fixed upon it the practice of exchanging the raw produce of the land, for the manufactured articles of foreign countries.

Our education and all our habits and efforts have been devoted almost exclusively to the increase of agricultural productions, and to the carrying and exchanging those productions for an unlimited variety of foreign manufactures. A very great majority of us have been bred to no other calling, and still remain ignorant of any other. We have continued in this practice, until the habit has become settled and fixed, and from which it is found difficult suddenly to depart. The opinion was extensively but vainly entertained, that it would be very late before it would become necessary to depart from it. It was presumed, that the wants and habits of foreign countries, had become as firmly and radically fixed to the practice of exchanging their manufactured articles, for our bread-stuffs and provisions, as our own. That the foreign countries with whom we exchanged these commodities, could not well subsist without our agricultural productions. That the policy and interests of those countries, would insure a continuance of this trade, as thereby they would retain their artisans at home, and find a market for much of their wool, iron, and other products, improved to the highest practicable value, by the labour of these artisans. Experience has, however, realized to us exactly the reverse of our expectations.

It may have been a laudable desire to be independent of all other nations, which induced those manufacturing countries, on their part, to decline taking from us the only articles which we had to give them in exchange for their manufactures. While on our part, we remain so radically fixed to the use of foreign commodities, that we cannot refuse to receive them, under any of the disadvantageous terms imposed by those from whom we obtain them.

It is found that foreign countries subsist very well without any, or but a small proportion of our agricultural productions, and the most of them are refused admittance, under severe penalties; (See note A.) while our taste and inclinations for their manufactures, are not at all abated, nor their consumption limited in this country, by any other rule, than our poverty and want of the means for paying for them. We could give them agricultural produce in abundance; but since it is refused to be taken in exchange, it has become of very little value. With the value of its products, land has fallen in price, its improvement is neglected, and the numerous class who hold, or cultivate land, have become disheartened, and discouraged. Very many of them are under monied engagements, made in other times, and with different prospects, when money was valued less, and land, and landed produce much higher.

It would be difficult to propose any measure like that which would afford instant relief to the agricultural class. But it may be encouraged to hope for relief, in proportion to the labour and capital of the community being equally distributed among the various branches required in producing the necessaries of life.

It is necessary, however, to be recollected, that the land, and the labour and capital, which are now employed in the production of agricultural goods, are not equally distributed among the various branches required in producing the necessaries of life.

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proportion of those trades and professions are found, and those of the coarser or more common, leaving the wealthy and more fashionable part of the community, to be supplied by foreign importations, great embarrassments are frequent; attributable to the causes already noticed. These communities are, moreover, comparatively poor; because the rich and fashionable, who command whatever money or means there may be in the country, apply that money or means at any required sacrifice, as it relates to the other classes, to the support of the artisans, productions, and manufactures of other countries. As a general rule, the wealth, comfort and strength of a community, is augmented or depressed, in proportion as it possesses a knowledge of all the arts and sciences, required in producing every article in its consumption, to which its climate is adapted, and in proportion to the industry with which those arts and sciences are prosecuted by that community.

The rude tribes of this country possessed extensive territories of fertile land; but they were ignorant of the arts; their numbers and comforts were small, and their power insignificant. The Tartar, or cattle-raising regions, are more numerous; they have a surplus of cattle and horses, but nothing else; they feed on their flesh and are clothed with their skins, and exchange a small proportion for implements of war. The people of this country have advanced one step beyond them. We have a surplus of cattle, bread-stuffs, provisions, and raw materials, with a few rude artisans: and here we stop, unless we take in the productions of the sea and of commerce. But we still remain dependent upon foreigners for about all the finer fabrics. Of woollen goods to the amount of \$8,000,000—of cotton, to nearly 6,000,000 dollars—of silk, more than \$5,000,000—of cutlery, hardware, iron, steel, &c., nearly \$5,000,000; and a vast amount of other manufactured articles, exceeding altogether \$1,000,000 of dollars.

A nation can never be rich, let the extent of its territory, the fertility of its soil, and number of its people be whatever it may, if its labour and capital is limited to the production of but a small proportion of the commodities required in its consumption. For although it may produce a great surplus of some particular articles, which, at particular times, may possess fair exchangeable values, still it cannot be certain of the necessary exchanges; and it sometimes happens that the exchange cannot be made on any terms. Its surplus articles then become of no value, while it remains in greatest want of the articles for which the exchange was intended. Mean time, the subject upon which her capital and labour had been expended in producing the surplus, is neglected and goes to decay.

We have the land, and understand the art of making bread-stuffs, provisions, and other landed products adapted to our climate; but our principal customers for these articles have forsaken us; they will not allow many of our articles to be consumed in their countries on any conditions. We have no control over them; they consult their own interests. If we had, however, the artisans for converting only one of the raw materials which we raise, and which we might readily raise to any required extent, (I mean the article of wool,) into the manufactured articles of that kind, now imported, it would afford great relief to the country.

But it is unfortunately our case, that the large space between the landed interest on the one hand, and mercantile and monied on the other, which in all well ordered communities is filled with artisans and manufacturers, is left vacant, or nearly so, in this country. The landed interest, feel at this time that class. We want it to be filled with artisans and manufacturers, of converting raw materials into manufactured articles.

into the manufactured articles for which we have heretofore exchanged those raw materials with foreigners. Our rent-receiving, and interest-receiving gentlemen, our officers of government, professional and mercantile gentlemen, will not receive our products in the shape of raw materials, at adequate prices, for their demands against us, nor in the shape of coarse fabrics, into which some few of them may be converted by the half learned artisans of our country, while they have the option of taking these, or the finer and handsomer fabrics of foreign countries. But was the eight millions of dollars, now annually paid to foreigners by this country for woollen goods, to be distributed among our own people; to the farmer in part for the wool, and for the bread-stuffs and provisions, consumed by the artisans while converting the wool into articles now imported, it cannot be doubted but that great relief would be afforded thereby to the farming or landed interest. The same may be said in respect to all the manufactured articles now imported.

The cause of this great depression of agriculture is obvious. That branch of business, compared with every other, is overdone. At least eighty per cent. of our population, is fixed, and from habits and education, confined to that profession. A due proportion, compared with other, and better organized countries, in this respect, would be much less, and that of artisans much greater. The proportion in each should be nearly equal; and there is no other way in which the board of agriculture, or agricultural societies, can as well promote the farming interest, as by facilitating the introduction, rise, and increase of artisans, within this state, until their numbers shall be adequate to the demands of the country, and to the consumption of the agricultural productions raised in it. To effect this object, it will require not only the most vigorous efforts of this board, of the county societies, and of all good citizens, but the aid and protection of government. For it is most certain, that manufactures cannot be usefully and readily commenced in a country which has been in the practice of receiving its supplies from foreign countries, let its population be whatever it may unless they are protected, and defended from the interference of foreigners, until they have passed through the initiatory state, and have become acquainted with, and instructed in, the different arts and processes, indispensable to their profitable and useful prosecution.

It is asked, by the objectors to the protection required, why the capital and labour which is now employed in the land, do not commence manufactures if they afford better employment?

It may be answered, that the difficulties and losses to be encountered at the commencement of any newly set up branch of manufacturing business, in a country where but very few of the mechanic art have arrived at maturity, are much greater than meets the eye of a casual observer, and which cannot be overcome by any thing short of direct protection, or causes incidental and tantamount to that protection.

It is not only a knowledge of the practical operation, and application of the particular parts of trade, about to be set up, which is to be learned, but the aid of other and distinct branches is to be called in, upon which the principal branch is incidentally dependent. The tools, implements and machines of the branch intended to be put into operation, are to be made by another, or several other different branches. If the manufacturers of these tools are not already located within the country, who for want of employment, probably are not, the tools, or the workmen to make them, are to be imported from abroad. But should these difficulties be surmounted, the articles manufactured in the principal branch, must be made in as workmanlike manner, not only in every substantial particular, as the articles imported from abroad.

or the foreign article will have the preference in the market.

It can hardly be expected that new beginners will rival, at the commencement, old establishments in all these particulars. But should these difficulties be surmounted, there still remains further and more important embarrassments to be overcome. The old country manufacturers, English in particular, who have been in the practice of supplying, say woollen goods, to this country, have their workshops and machinery erected there for that purpose. The owners of these works, and the workmen attached to them, depend for their daily bread upon sales in this country. The wool-grower, the merchant, and the shipper, all depend upon sales to be made here. The usual quantities, to supply the ordinary demand, are therefore made. If orders for them are diminished, the articles accumulate in the hands of the manufacturer, and in the absence of orders, they are sent out by the manufacturers themselves, in succeeding years. These goods are met in our market by the like articles made in this country. The market is overstocked. One, or a part of each of the quantities must be withdrawn, or both are to be sold at a sacrifice. Traders can never voluntarily agree to withdraw. Their necessities may compel them to sell. The older establishments, with greater experience and larger capitals, hold on to their accustomed markets. Not so with our new beginners. All their calculations have been made upon obtaining the usual market price of the article. If they cannot obtain that, they are ruined. Their small establishments are stopped, and broken down; and the adventurers become the victims of their patriotism or their credulity.

NOTE A.—In the export of domestic articles, upon which the landed interest mainly depends, it may be useful to compare latter, with former years. As far back as the year 1790, there was exported—

Of flour in that year, . . .	bbls. 724,623
Of wheat, 1,124,456 bushels, equal	
to bbls. of flour, . . .	224,891

In 1823, there was exported—	
Of flour, . . .	bbls. 756,246
Of wheat, 4272 bushels, equal to	855—751,101

Excess of 1790, over 1823,	192,413
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Indian corn exported in 1790, . .	bush. 2,102,137
The same in 1823, . . .	749,034

Excess of 1790, over 1823, . . .	1,353,103
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There is also about a proportionate decline in nearly every other articles of produce, excepting in the articles of cotton and tobacco. The latter has remained nearly stationary; but cotton has advanced from a mere trifle, to more than 20,000,000. In 1720, the population was less than 4,000,000; in 1823, it was probably 10,500,000. The exports of domestic articles, were not kept separately from exports of foreign articles, until 1796. In that year, distinct accounts of each were commenced, and have been continued.

In 1796, the aggregate export of domestic articles, was . . .	\$40,764,097
Of which the proportion of cotton was 6,108,729 lbs. and of value, about	1,500,000

Leaving for bread-stuffs, provisions, tobacco, and all other articles, . . .	39,264,097
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In 1823, the exports of domestic articles, were . . .	47,155,408
Of which, there was of cotton 20,445,520	

Leaving of bread-stuffs, provisions, tobacco, and all other articles, but . . .	26,709,888
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And a diminution, falling wholly on the grain and tobacco growing states, of \$12,554,000

In the mean time, from 1796 to 1823 the population had increased, from about 4,750,000, to, say 10,500,000; with probably about a like increase in the quantity of land brought into cultivation; and some, but no very considerable advance towards manufactures; and no material alteration in the pursuits of the people. By extending the calculations, it will be found, that the exports of domestic articles, apportioned to the population, has, in the cotton growing states, advanced; but with the bread-stuff, provision and tobacco growing states, they have diminished from \$8.20 cents to each person, which it was, or thereabouts, in 1796, to \$2.71 cents per head, in 1823. By excluding the tobacco growing states, the proportion would probably be reduced to less than \$2 per head, even including domestic manufactures, of which, coarse cotton cloths must be considerable, though the exact proportion of these is not known.

The following table will shew the decline in the quantity and value of flour, exported from 1817 to 1823, both years inclusive:

	bbls. flour.	value.
In 1817, . . .	1,479,198 . . .	\$17,751,376
1818, . . .	1,157,697 . . .	11,576,917
1819, . . .	750,660 . . .	6,005,280
1820, . . .	1,177,036 . . .	5,296,664
1821, . . .	1,056,119 . . .	4,298,043
1822, . . .	827,265 . . .	5,103,280
1823, . . .	756,246 . . .	5,057,195

(To be continued.)

ON GATHERING FRUIT.

(Extract from the Novascotian.)

In the part of the Lothians where I came from, the best farmers are so careful of those turnips which they wish to keep over the winter by preserving in heaps, that in pulling them, they will not suffer them, for the sake of expediting the work by gathering in piles, to be thrown about in the field; for it is found invariably, that if a turnip be bruised in the pulling, it will not only rot itself in the heap, but infect its neighbours. And in putting potatoes into their cellars or into clay heaps, it is a general rule, that no potato which has been cut or bruised, by the fork or hoe in digging will be put into the cart, as they are found to rot almost immediately, and to spoil ten times over their value. Now if such care is necessary to keep potatoes and turnips uninjured, and is found by judicious farmers to be profitable, surely apples, which are of a more tender nature, demand even more care.

The only way to get superiour fruit is to let the apples or pears ripen and mellow upon the tree.—Now by this plan of gathering which is usually adopted in our province, it is quite impossible to do this, for fine fruit, perfectly ripe and full of juices, if shook from the branch to the ground, would be converted into a lump of slush; and hence fruit in this province is usually secured before it has come to maturity. This is another reason for its general inferiority.

To remedy these evils, a slight reference to the practice of other countries and a little more care among ourselves is all that is required. In Columella, Varro and all the old Roman agricultural writers, I have been told, there are accurate directions to be found for the management of the orchard, and in particular for the gathering of the fruit. In England and in the States I know they are just as particular in this as they are in the choice of their grafts, or in cleaning and pruning their trees in the spring. A farmer, with whom I am acquainted, once told me that while in the States he received the following practical directions from an old friend of his—

“The mode in which I gather my fruit is as follows:—After the apples on the tree have become perfectly ripe and mellow, on a clear sunshine day, I turn out all my children and servants. Every one of them is provided with a small basket and ladder, and being each appointed to a tree, sometimes two or three to one, they begin to fill their basket by hand picking; and if any apple should chance to slip through their fingers and fall to the ground, this is put into a different place for immediate use, as I have always found that a bruised apple, if mixed with a heap of perfect ones, will injure the sale of the whole; sheets are laid upon the ground, and as the baskets are filled, their contents are carried, spread out, and after lying in the sun for an hour or two, till thoroughly dry, they are then put by hand-fuls into dry barrels, with straw at the head and bottom—after they are closed up, they are then fit for market. I have some trees in my orchard which are so much esteemed, that I make their fruit be picked singly, and before put into a barrel are each surrounded by a small slip of paper. Nothing but cider apples should ever be shook from the tree, allowed to lie in heaps, or be carried in bags.”

In the directions which are given above there is I think too much particularity, but if they were in part followed by our farmers it would not only be to their own credit; but would really be for their interest. Good apples are now selling here at 2s to 3s a bushel, just about the value of potatoes, whereas, if they were gathered so as to keep during the winter and packed in barrels they would more readily command three times the price.

Your very obedient servant, X.
Pictou, Sept. 26.

HORTICULTURE.

CULTIVATION OF SILK.

J. S. SKINNER, Esq., October 20, 1826.

Sir,—On the interesting subject of the cultivation of silk, I some time since promised to present you the result of my observations, for publication in the American Farmer. You are aware, that all my knowledge of the subject is derived from reading the publications of others, and from a course of experimental observations during the last summer.

I have no experience in the cultivation of the mulberry tree, with the leaves of which the silk worm is fed. From reflection and observation, however, I am induced to believe, that wherever the apple tree will grow and thrive, the white mulberry will be “at home.” I also think, that the seed, or small cuttings, ought to be planted, or set out, in the spring, in rows, two or three feet apart; and as soon as the leaves are pretty well grown, they may be gathered for the worms in such quantity as is required for present use. This, I believe, is the mode of cultivating the mulberry in China. There, a field of the mulberry presents more the appearance of a field of cotton than of any thing else. By this process the cultivator is enabled to gather the leaves with more ease than from the tree. I am clearly of opinion, that no other tree or vegetable will be found to be a good substitute for the mulberry; and this is the less to be regretted, when we consider that no other vegetable offers greater facilities for its cultivation in any of our various climates. To spend time and money in endeavours to find a substitute for it, is like trying to find a substitute for Irish potatoes, the attempts at which have often excited my risibles. Whether the leaves are taken from the tree or the small bush, they should be gathered in such quantities only as will suffice for the present use, as the worm does not like wilted leaves. They should, also, be perfectly clean; no sand, dust, or matter of other insects, should be left on them. They should, fur-

thermore, be perfectly free from water; therefore, they should not be gathered in the morning while the dew is on them; or after a rain, till they are dry. If they are wanted at these times, they must be gathered and well dried with a napkin before being laid before the worms.

We will now suppose that the mulberry leaves are forthcoming, and the little worms are only waited for. When the thermometer ranges at or above 75°, take the eggs, which have been kept from frost, heat and moisture during the winter, and expose them to the air in a dry room; any common room will answer the purpose. In eight or ten days the little worms will leave the eggs, when some of the tenderest mulberry leaves must be laid over them, which they will soon begin to eat. They will live a day or two without eating. (36 hours by my experiments;) but they ought to be fed immediately after leaving the egg. Almost any number of them may be kept on a common table for the first two weeks, at the expiration of which time they will have grown so as to require more room. Fresh leaves ought to be given them four times a day; simply lay the fresh leaves over the wilted ones to which the worms are attached, without removing the worms, who will very soon get on the top of the fresh ones and begin to eat. The room should be dry, airy, and not too light; and the rules of the theatre must be enforced, viz. smoking segars (or tobacco,) cannot be permitted. (See sequel.) In the course of four weeks the worms will moult, or shed their skin, three or four times, and for twenty-four hours previous to each of which moultings, they will appear stupid and sickly. When the dry leaves have accumulated so as to produce heat, they, with the excrement of the worms, may be removed, by gently raising the upper leaves and removing the under ones. Great care will be necessary to prevent ants, birds, &c. from destroying the worms. In from 30 to 36 days the worms will cease eating, appear uneasy, their skins become a little transparent, and by examining closely, scattering fibres of silk will be found on the leaves around them. When these observations are made, the worm that is the subject of them, is beginning to spin, and ought to be removed, by means of the leaf on which it is, to the dry twigs prepared for the purpose. He will, in the course of a few hours, spin the *tow*, or coarse silk, in the inside of which he will, in a few hours more, begin the cocoon.

The twigs should be dry, (well seasoned,) and abundant in small, delicate branches. I know of none better calculated for this purpose than those generally used for brooms for sweeping streets. The worm requires a space among the branches large enough to contain a small hen's egg, in which to form its cocoon. In four days after commencement, the cocoon may be removed from the branches; and in four days more may be reeled, if intended to be reeled; or baked, if intended to be kept or sold in its present state. If the silk is not intended to be immediately reeled, the cocoons must be put into an oven, heated sufficiently to kill the insects, but not enough to scorch the silk; otherwise the moth will make its way out of the cocoon and spoil the silk by cutting or rotting it, to effect a passage.

When the cocoons are removed from the twigs, they ought to be kept separate; i. e. those of each day by themselves; else, if those of several days are mingled together, the moths of some will have begun to make their way out and spoiled the silk, while others will not have finished spinning, when the cocoons are reeled or baked. For this purpose, small baskets are convenient depositories, which may be labelled with the date at which their contents were deposited therein.

A few of the cocoons ought always to be selected for reproduction, and as every pair of insects may be calculated upon for producing three hundred

worms, it will be easy to arrive at the number of cocoons to be saved for that purpose. Those for reproduction may be laid upon white paper, on a shelf in a common room. In about sixteen days, the insect will leave the cocoon in the shape of a moth, or greyish white butterfly; and within forty hours the female will commence depositing eggs on the paper. The eggs are at first of a delicate light yellow colour, but become of a pale blue, and often of a light slate colour, after a few hours, and of the size of a very small pinhead; they adhere closely to the paper on which they are deposited, and which, after the moth has ceased laying, may be rolled up and put away for future use, in a cool, dry cellar, in hot weather, and in a place free from frost and moisture in cold weather. I have observed, that eggs which have not been fecundated by the male, remain yellow—at least there are some of the eggs that remain yellow when the others change colour, and these I have never known to produce worms. An acquaintance obtained a single cocoon, which proved to be a female; the insect laid eggs, but they never produced worms, and remained yellow. The moth eats nothing after leaving the cocoon, and generally dies in the course of three or four days after the eggs are laid. I had one, however, that lived to see its offspring leave the eggs, and for several days afterwards.

I have never seen the process of reeling the silk performed, and what I know of it is gathered from publications already before the public. This process is performed, generally, in the following manner: clear the cocoons of the tow, or loose, coarse silk, and put two or three dozen into a vessel of hot water. Stir them round a little with a small wisp of switches till an end of silk attaches itself to the switch, when it is to be secured, and the process continued till ends enough are obtained to form a thread of the size required. All the ends are then to be put together, passed through rings suspended from the ceiling and carried to the farthest part of the room to a common reel, by which it is slowly wound off in the usual way of winding yarn. The reasons for carrying the silk through the rings across the room, is thus explained: there is a considerable portion of gum in the cocoon, which is dissolved by the hot water, and if the silk be wet it will make the fibres adhere; to allow the silk to dry, therefore, it must be exposed to the air before it is reeled. As fibres break, and the thread becomes too small, other ends must be obtained to preserve the size of the thread.

General observations.

A dozen or more cocoons will contain about an equal number of each sex. I have observed, that the directions in some books to select sharp-pointed cocoons for males, and the more round ones for females, are fallacious. An important error seems generally to obtain credence. I refer to the general practice, the result of erroneous supposition, of obtaining but one generation of worms a year. The generations may be multiplied as long as the weather is warm enough to hatch the eggs, and mulberry leaves remain green. Instead of one generation of worms, and one crop of silk a year, therefore, two, always, and often three, of each, may be obtained. I obtained two worms on the 7th June, 1826. They formed their cocoons, came out on the 24th June, and deposited their eggs. On the third of July the eggs were hatched, and I had between two and three hundred young worms. These worms grew and spun their silk as well as the first generation, and I have now some of their eggs for use next spring. From these facts, it will appear, that if we obtain eggs in April, we may hatch them, obtain the silk from some of the worms produced, and eggs from others; these last eggs may be hatched and another crop of silk and supply of eggs obtained, which last eggs, if the weather be warm

enough, (80° upon an average,) and mulberry leaves green, may be hatched, and worms, silk and eggs produced. Instead, therefore, of the cultivators of silk confining their operations to one generation of worms, and crop of silk, a year, they may extend them to two or three. This fact is of importance, as the work and produce of two or three years, according to the old plan, may be performed and obtained in one by that now suggested. Another mode of continuing the work through the summer has been suggested: Have a sufficient quantity of eggs to enable you to bring out for hatching in April, as many as you will be able to attend to; another parcel to be brought out in May, and others in June, July and August. But it will be perceived that an immense number of eggs will be required for this plan, and therefore the multiplication of generations is preferable.

Disease among silk worms, is another subject of importance and ought to receive the attention of cultivators. I had eight worms in my private room, kept there for convenient and frequent observation. They were healthy, about half grown, and eat heartily when they were placed there. On the 24 August, I observed one of them to be quite unwell, eat very little, and in discharging its feces laboured hard. On examining the excrement with a microscope, found it to consist of viscous matter and *undigested pieces of leaf*, apparently in the same state in which it was taken into the stomach. The excrement of the healthy worms, I found to consist much less of the viscous matter, and scarcely any of the leaf in a perfect state—that consisting of a fine branny matter, of a dark green colour, evidently formed from the *well digested leaf*. During the 2d of August the worm eat very little, and discharged its excrement with great difficulty in very small quantities, until 2 p. m., when it discharged, after great labour, a double portion. On examining this it was found to partake of the same properties of that before described. After this double discharge, I observed the rectum considerably protruded, which was of a darker yellow than those of the healthy worms, exposed when they discharge. I supposed this dark yellow to be inflammation. On the 4th, the protrusion and inflammation of the rectum continued. In the evening of the 5th, the protrusion and inflammation continuing, and the worm evidently sinking very fast, examined it closely, and noted in my memorandum, that mortification must take place in the course of the next day, unless a change took place for the better. The prediction proved correct, for, on the 6th, the rectum, so much as was exposed, turned black, and the worm died in the course of the night. Before this worm died, two others were taken sick, and ultimately, four others took the disease, exhibiting the same symptoms and in every respect following the course of the one whose case is above related, so that seven out of the eight died. The eighth was affected with the disease, but recovered and formed its cocoon.

From careful observation I am convinced, that the disease was *indigestion*, causing costiveness, which weakened and inflamed the rectum, and terminated in mortification and death. This disease is common among silk worms, for almost all the writers notice it in words like these: "Their tails turn black"—"a black spot was observed on the end of their tails," &c. For the cause of this disease we must look to further experience, and to more able investigators. But I have great reason to believe that the disease in my worms was occasioned by *tobacco smoke*. Indulging myself in the habit of smoking, the air in my room was continually impregnated with tobacco smoke, and the insects could not breathe without drawing it into them. We know that this smoke often produces indigestion in human, and, we must suppose, much stronger constitutions, than those of very tender insects, and

are not used to smoking. The caution, therefore, given in a former part of this paper, not to permit smoking in the room where silk worms are kept, is founded upon the data above furnished, and, I think, ought to be attended to. Wet and damp weather also affects silk worms, rendering them stupid and inactive; but they will recover from the effects of this when the weather clears up. I am unable to suggest any remedy for the disease spoken of above. A few hints, however, may be useful as preventives. Never allow the dry leaves to accumulate, as they produce heat. As soon as a worm is observed to be diseased, remove it from the healthy ones; for it is quite possible the disease may be contagious—at all events, a worm in a high state of fever and mortification, continually in contact with them, must be deleterious to the health of the others. The disease in question is first observed, when the worm discharges its excrement. It labours hard, and is three times as long discharging as a healthy one. After the excrement is expelled, in a healthy worm, the rectum, which is always protruded in this act, returns in the course of a minute, and becomes invisible; but if the worm be diseased, the rectum remains protruded, and is of a glossy amber colour; in 24 hours it assumes a darker hue, and in a day or two mortification turns it of a dark brown.

I have now given you the result of my experience and acquirements on the subject of silk worms. If this paper should cause one needleful of silk to be spun where none was ever spun before, I shall be amply satisfied for the trouble of making the communication. I think every farmer ought to have his mulberry trees and silk worms. They would afford a very interesting employment for the female members of his family, and a much more interesting income. Every farmer's family can make the sewing silk necessary for family use, and a little to sell, with less trouble than is required to make flax thread. For weaving silk, factories will be established, who will buy the cocoons of the farmers, and reel and twist the silk by machinery.

Yours, truly,

GIDEON B. SMITH.

LADIES' DEPARTMENT.

FLOWERS.

(From Maddocks' Florist Directory.)

The *carnation* is of the class and order *decandria digynia*; according to Linnæus, it is the *dianthus caryophyllus*; *sive dianthus floribus solitariis, squamis calycinis subovatis brevissimis, corollis crenatis*; i. e. clove dianthus; or dianthus with solitary flowers; scales to the calyx rather oval and very short; the petals crenated or notched.

The *carnation*, according to Linnæus, is a native of Italy; the single clove *carnation* is, however, to be found growing wild on the walls of Rochester castle; but whether, from that circumstance, it ought to be deemed a native of this country, we pretend not to determine; it seems rather a disputable point, and therefore, after having related the simple fact, we leave the discussion to those who may be able to decide upon it with more certainty.

The *carnation* has attained its present degree of perfection, by the unremitting attention of florists to its culture from seed, the only line in which the species of any plant, or flower, can possibly receive improvement or variety.

The principal, or most generally esteemed sorts of carnations, cultivated in England, till within the last fifty years, were called *burstlers*, because their blossoms* consisted of a double pod;† the interior one being in the centre of the other, and containing likewise a great number of petals, which, by its

swelling, caused the exterior pod, or calyx, to burst; the blossoms of these *burstlers*, when properly managed, and in full bloom, were not less than four or five inches in diameter, and the centre of each was well filled up with the petals of the interior pod, so as to make a very uniform and noble appearance; but it required much care and skill to cause them to blow in perfection.

The attention of the florist was diverted from the cultivation of *burstlers*, by the introduction of a new description of carnations from France, about fifty years since; these were denominated *whole-blowers*, in opposition to the former term of *burstlers*; they were also called *French flakes*; their blossoms, in general, were furnished with only one pod or calyx, which by a little management on the approach of bloom was preserved in an entire state; the culture of them was, at the same time, attended with much less trouble, in other respects, than that of the former, and they soon obtained a decided preference.

But the improvement, with respect to the edge of the petal, is of still later date; the first sorts, both of *burstlers* and *whole-blowers*, being possessed of a fringe or serrature, in that part, like that of the pink; this has, however, been completely overcome of late years, and those possessed of that property, are not now esteemed to be of the capital sorts.

The word *carnation* is, probably, derived from *carnea*, the natural flesh colour.

The *pink* is of the same class and order as the *carnation*; according to Linnæus, it is the *dianthus arenarius*; *sive, dianthus caulibus submissis, squamis calycinis ovatis obtusis, corollis multifidis, foliis linearibus*; i. e. sand dianthus; or dianthus with mostly one flower on the stem, oval obtuse scales, to the calyx, the petals cut into many points, and the leaves linear or narrow.

This *pink*, according to Linnæus, is a native of the colder parts of Europe; it is also found in the north of England; but the improved varieties only, of what were formerly called *pheasant eyes*, form the subject of that part of the following work in which pinks are treated of, having now the preference in this and all other countries; these so materially differ, in some of their properties, from the original species, that it is not easy to ascertain to which of them, as described by Linnæus, they most properly belong; there is, however, reason to believe, that the *arenarius* of Linnæus, is the original *pheasant eye*, and as such it is given in this work.

The great improvements made in the *pink*, are of very recent date, and hitherto chiefly, if not wholly, confined to this kingdom; in short, we may venture to assert, that a *pink* called *Major's Lady Stoverdale*, raised from seed in the southern parts of England, by the person whose name it bears, was the first that deserved to be classed amongst such as are now held in esteem by florists; it was raised about twenty years since, and was the first *pink* possessed of that singular and beautiful ornament called a *lacing*, which is a continuation of the colour of the eye, round the white or broad part of the petal, which gives it a most elegant appearance.

Very little progress has yet been made towards divesting the *pink* of its fringed or serrated edge; but that effect having been produced in the *carnation*, we may reasonably hope, that it will in time take place in the *pink*, and that we shall be able to obtain tall, strong-stemmed pinks, with large handsome blossoms, consisting of petals as perfectly entire on the edge as those of the *carnation* or the *rose*.*

* Many years have elapsed since the first publication of this Directory, during which time considerable progress has been made towards obtaining pinks without serrated edges, some sorts being nearly perfect in that way. As it is held an estimable quality amongst florists,

The word *pink* is derived from the Dutch, in which language it signifies an eye.

The *polyanthus* is of the same class and order as the *auricula*, and has been considered, by different authors, to have originated from different species of the *primula*—some suppose the *cowslip*, others the *oxlip*; but the author of the *Flora Londinensis*, treating of the *primrose*, considers it as the original parent of the *polyanthus*, to whom we refer the reader for his reasons, which he gives at large in that excellent publication.

It is asserted, however, by some, that the *polyanthus* is a native of Turkey, where it may still be found in great beauty, &c.* To whatever plant it owes its origin, its present highly improved state is doubtless the effect of long and assiduous culture, which, like the *auricula*, *carnation*, and *pink*, has been chiefly confined to this country. The beautiful yellow of the *cowslip*, which it did not formerly possess in the same degree of perfection as at present, has, in the opinion of some, been communicated to it, within the present century, by impregnation; it has likewise received very considerable improvement in its other properties, within the last twenty or thirty years; and the sorts known fifty years ago are not now in cultivation, being neglected in proportion to the successive acquisition of new and superior varieties.

The word *polyanthus*, or *polyanthos*, is derived from the Greek, and implies many flowers.

MISCELLANEOUS.

LOCK JAW IN HORSES.

We publish the following communication, by a respectable physician of this county, with pleasure. Every thing that can contribute to the relief, under disease, of that noble animal, the horse, is worthy of attention:

This disease much more frequently occurs in that useful animal, than farriers, and those who pretend to know something about it, are willing to allow: and as ignorance of a disease will ever lead to mischievous and destructive practice, I offer the following lines to a discerning publick, hoping that they will expose the error which has heretofore existed with regard to the true nature of the disease in question, and point out a more rational, safe, and efficient practice.

In this disease the nictating membrane becomes conspicuous, the nose is pointed horizontally, and the tail raised considerably, and turned a little to one side. The horse ruminates his food like a cow, scarcely separating his jaws, and his walk is much changed,—both his fore and hind legs being much farther apart than usual. His flesh becomes very hard, and at last his jaws are completely locked. This is commonly the last symptom; but in some cases all these symptoms appear nearly at the same time. When this is the case, I consider it as an unfavourable sign: for the slower the symptoms succeed each other, the less dangerous the disease, and vice versa; for when the affections of the jaws soon succeed the other symptoms, there is the greatest danger.

One of the greatest impediments to the cure of this disease is the vulgar error of supposing that the horses have what is called the *hooks*, an opinion that originated in ignorance, because it has no foundation in nature. To prevent the cruel operation of cutting for this supposed disease, (which would be worse than the disease, if it existed at all,) I shall give a description of this part of the eye. The

there is little doubt but that it will become as indispensable a qualification in the *pink*, as in the *carnation*, and, perhaps, at no very distant period.

* Vide Hanbury's Complete Body of Plant Gardening, printed at London, 1771 and 1772.

* Corolla.

† Calyx.

horse, like all other brute animals, being liable to the introduction of foreign matter into the eye, and not being favoured with hands like man, or other means of removing it, has been bountifully furnished by nature with a nictating membrane. This is of a strong cartilaginous nature, and is put in motion by the retractor muscles drawing the eye into the orbit, by which motion this membrane is brought over the globe of the eye: thus, by the motion of the eye, it serves to cleanse or wipe off any offensive matter that may have been introduced.

Many have believed that this membrane had arisen there in the course of a few days, because they were not acquainted with the causes that rendered it more visible than usual. There are many such causes, but more especially the two following: 1st. Inflammation in the eye, which, when stimulated by the rays of light, is drawn into the orbit, leaving the membrane partially exposed. 2d. Spasms of the muscles of the eye, or parts adjacent, which produce the same effect, and is the reason why the tetanus is so often supposed to be the hooks, which has no existence. This mistake is often fatal; for I have sometimes been unable to persuade the owners of horses of these deceptions, and the cartilage has been cut out to the destruction of the poor animal.

The causes are, injuries of the feet; iron nails often occasion tetanus than any thing else; docking the tail; strong stimulating dressings after certain operations; operations which are followed by a high degree of inflammation.

I conceive there are two species of tetanus very different from each other,—the one evidently arising from great and general debility, giving rise to spasms, and the other originating from excess of inflammation, requiring evacuations for its cure. I imagine that the disease proceeds to a more rapid termination when it proceeds from fever, and the reverse.

In tetanus from wounds, the wounded part heals long before the symptoms of lock jaw appear; in many, from five to six days to two or three weeks afterwards. When the spasms were communicated to the intestines the chance was a bad one, and an obstinate constipation was equally unfavourable. With mercury I have cured three cases out of five. The fourth would have done well, had not the owner of the horse, contrary to advice, permitted the operation for the hooks to have been performed. The fifth was one of those desperate cases, and so far advanced, that I think no remedy could have had any effect.

I could not perceive that the mercury had any effect upon the excretions, or any other except that of relaxing the spasms in a few hours after it was given. The glands were not affected that I could perceive, and no part of the mouth, fauces or tongue, shewed any marks of its action. The intestines were little if at all affected, as no purgative effects were perceptible. It may be useful to state a case exhibiting in general the mode of treatment I have used in those cases where mercury proved successful.

I was called to see a horse supposed to have had the hooks, and as the owner pretended to no knowledge of the disease, he had, through the persuasion of others, suffered the operation to be performed several days before I saw him. Upon inquiry I found that a bone had entered his foot about three weeks before; but had been extracted a day or two afterwards, and left little or no lameness. For this reason those who saw him could not be persuaded that the disease could have arisen from this cause. It was easy to perceive that the symptoms of the lock jaw were increasing; but as they had proceeded gradually, my prospect was pleasing. The wounded part was dilated immediately, and dressed with cantharides and spirits of turpentine. The symptoms did not abate, and the evident mark of strong spasmodic actions rendered something

farther necessary. I with great difficulty introduced into the mouth six drachms of calomel: 2d day calomel was repeated, but no appearance of relief: 3rd, calomel repeated, no relief: 4th, calomel repeated, and the spasms less frequent, and of shorter duration: 5th, spasms relieved; this morning he passed from the rectum a small watery discharge, but nothing like a free or active purgative: 6th, he is better, and can distend his jaws; I gave an injection of corn meal gruel: 7th, purges a little, and the injection was repeated: 8th, no more passage; his jaws quite free, and his appetite returning. He soon recovered, and is now a very fine animal.

(W. Rep. Oct. 20.)

RULES FOR ASCERTAINING A HORSE'S AGE.

Yearlings and two year-olds are alike in the mouth, and must be judged by general appearance. At three years old the horse has four *horse teeth*, two above and two below, in front of the mouth, which supply the place of the sucking teeth. At four he has eight horse teeth, four above and four below, having the corner teeth only sucking teeth. At five years old these are gone, and the *mouth is up*—that is, all the teeth are horse teeth, and the tusk is up on each side of the mouth. A dark mark, or hollow, is generally observable in all the teeth in the bottom jaw at just five years old, and the tusks are concave in the inner surface. At six, the middle teeth have quite lost this mark, and the tusk is higher up, and longer, and not so concave. At seven, the next two teeth have lost it, and the corner teeth only have the mark left in them. At eight it has grown out of these, and no mark is left at all. The tusks are also become longer, and instead of being concave in their inner surface become convex—the horse is then termed aged. There is a great deal of difference in the mouths of horses—some have lost the mark in all, except the corner teeth, even as early as five years old—others have the front teeth in the top jaw projecting over the bottom teeth, at the same age—and I have seen horses at seven years old, with the corner teeth appearing like those of a five year old. You may form some idea of the age from the appearance of the mouth in general, when the marks are no longer visible. If the corner teeth do not appear long, and running forward as it were, to the front of the mouth—if they retain their square shape, and shut well together—if the tusks are not blunt, and have the least concavity in their inner surface, you may conclude that the horse is not very old, particularly if his head is not grey, and not very hollow above the eyes—though this latter shape sometimes exists in young horses. A concave tusk is the most certain criterion of youth, and as mares have no tusk at all, they must be judged with reference to what we have said about the corner teeth. It is here necessary to mention that the difficulty of acquiring an accurate knowledge of the age of horses by their teeth, is very much increased by the tricks that are practised.

It is generally allowed that no horses are fit to work till at least five years old; and it is a common custom with great breeders in the north of England, and with many dealers, to pull out the sucking teeth when the animal is rising four years old—the mouth is forced by these means, for the horse teeth succeeding soon after the operation, the animal appears to be a five years old. To detect such deception regard must be paid to the tusk. Every horse, upon attaining the full age of five, has the tusk completely up on each side of the mouth; but in forced five-year-old mouths the tusk is only just making its way through the gums. There frequently exists also in the latter an irregularity in the front teeth, as well as a backwardness in the growth of the tusk—forced mouths vary in their appearance according to the time of performing the operation—and the habit of

observing horses' mouths will alone enable you to ascertain where any artifice has been practised.

(A. E. Farmer.)

SPORTING OLIO.



TREE HILL RACES—RICHMOND.

On Tuesday evening, 17th Oct 1826, the Club assembled to choose a President, vice Theophilus Field, Esq., deceased—when Andrew Stevenson, Esq. was elected. The same evening, entries were made for the Proprietor's Purse, \$300, two mile heats, as follows:

Mr. Wm. West's sorrel mare Lady Greensville.
Mr. Wm. R. Johnson's sorrel horse Pirate.
Mr. J. J. Harrison's sorrel mare Lady La Grange.
Mr. Henry Clay's bay mare Sally McGee.
Mr. John Minor Botts' sorrel mare Phillis.
Mr. Wm. Wynn's sorrel horse Restless.

Wednesday proved a fine day, and the course was well attended—the ladies only, seeming to reserve themselves for the four-mile day. From the number of horses entered, the reputation of some of them, and the fine appearance of all, the amateurs of the turf anticipated much sport—an expectation which the result fully gratified.

1st Heat.—At one o'clock, all being ready, and the word given, a fair start was made. The whole six ran off beautifully, and for the first half mile, the lead was alternately taken and lost by Sally McGee, Lady La Grange, and others. After this, it was again taken by Sally McGee, and steadily held to the end of the heat. Restless, in the first round, manifested fatigue or want of order, and was fairly distanced. The remaining five were separated by no great distance, and passed the goal in the following order: 1. Sally McGee; 2. Lady Greensville; 3. Pirate; 4. Phillis; 5. La Grange. Time, 4 minutes 2 seconds.

2d Heat.—Restless being distanced, the numbers were reduced to five. This heat was the most interesting, as it was to decide the question as to broken heats—one in which the great body of spectators felt more interest than any other. If lost by Sally McGee her chance was supposed desperate; as the well established bottom of Phillis and Pirate it was thought must in that case prevail, for no one believed her their equal in that quality. It proved one of the most interesting heats ever witnessed. The lead was taken by Sally McGee, and kept to the quarter stretch in the last round. For the whole of this distance a *brush* was maintained between Phillis and Sally McGee, both contending in good earnest for the heat, while Pirate and Lady La Grange seemed satisfied to save their distances. Phillis appeared rather to lose than to gain on her antagonist, at the moment of entering the last quarter, and those who calculated upon broken heats began to despond, or rather to despair—when Lady La Grange, who was 60 or 70 yards behind Sally McGee, finding Phillis unequal to the task of beating the heat, to the great surprise and animation of the field, sprung forward, and gaining at every jump, passed Sally McGee just before reaching the judge's stand, and came out a few feet ahead, amid the shouts and cheers of the spectators. Time, 3 minutes 57 seconds.

3d Heat.—Lady Greensville having been drawn, the numbers were now reduced to four. In the course of the 2d round, Sally McGee again took the lead, and kept it, though at no great distance, to the goal—thus winning the race, and by proving her bottom equal to her speed, giving promise of

future celebrity. She was succeeded in the following order: 1. Lady La Grange; 2. Phillis; 3. Pirate. Time, 3 minutes 57 seconds.

No race was ever more enjoyed by the spectators.

Second Day.—Jockey Club Purse, \$1000, four mile heats.

On Wednesday evening, the following entries were made, viz:

John Minor Botts' bay horse Gohanna.

Wm. Wynn's grey mare Ariel.

Henry Clay's bay horse Monsieur Tonson.

James Ross's dark bay horse Blenheim.

This was the great day—and a great concourse assembled to witness the exhibition. Much of the beauty and fashion of the metropolis and adjacent country, sanctioned the race with their presence, and the piazza appropriated to the ladies, blazed with a lustre altogether unprecedented on the Tree Hill Course. It was obvious that racing, the old and favourite amusement of Virginia, had revived in all its former lustre—and the elderly gentlemen on the ground, had their imaginations carried back to the days of Brimmer, Flagellator, Florizel, and Peace-maker.

Notwithstanding the numbers and the general expectation, the *knowing ones* did not anticipate a hard contest. They had already assigned the victory to Ariel, and in the excess of confidence, inspired by her severe contest with Flirtilla at New York, and her sweeping all before her during the last and present seasons, winning treble the amount of her purchase, offered odds in her favour. Ariel against the field, was the universal cry, and so strong did the tide run in her favour, that thousands of bets of this character were probably offered and rejected. In many instances 2 to 1, 5 to 3, 100 to 75, or proportional odds, were bet upon her, and from the indications, there is reason to believe that large sums were won and lost. Her appearance, indeed, seemed to justify the confidence of her backers—she looked more like a bird than a horse, and was supposed to be in tip top order. However, when Clay's horse, Monsieur Tonson, appeared upon the field, there seemed some abatement in the Ariel fever. If her form was faultless, so was his—if she appeared an equestrian Venus de Medici, he matched her as the Apollo Belvidere—if she seemed to walk upon springs, he appeared to tread upon Indian rubber. All who saw him, pronounced his exterior figure unexceptionable, and asserted that if symmetry of proportion and speed had any connection Mon. Tonson was the full match of Ariel. This horse was a stranger, of Pacolet blood, and notwithstanding his promising appearance, gained from these circumstances, no other confidence, than the belief that he stood a tolerable chance for the first heat. If there should be broken heats, it was thought Gohanna would prove the victor at last—for on him, as on his sister Phillis, great reliance was placed for bottom, and his former performances had given him considerable reputation for speed. We heard little said of Mr. Ross' Blenheim—and the common opinion was, that he lived too high up the country (Albemarle,) to contend with the favourite race horse region, between the Atlantic and head of tide water. The result proved the general expectation not altogether unfounded.

1st Heat.—At the appointed hour, the signal was given and all four horses made apparently a fair start. Gohanna early dropped behind, confirming the impression of the public, that going for bottom, he was willing to throw away the first heat. A small brush was sustained between Mon. Tonson and Ariel, neither appearing disposed to run, or to permit the other to go much ahead. Blenheim also made some exertion to win the heat. For the greater proportion of the four miles, Ariel kept ahead—whilst the solicitude of the whole field was awakened, by observing that the saddle had slipped from its proper station, fairly up on her shoulders.

In the last half of the fourth mile, Mon. Tonson shot ahead; a circumstance that was generally ascribed to the position of Ariel's saddle—and kept the lead to the end of the heat, whilst Gohanna, to the surprise and chagrin of the whole field, was distanced by about a length. It was apparent that this heat was no decisive trial of speed between Ariel and Mon. Tonson from the time, and their passing the goal at every round, hand in hand. Blenheim saved his distance narrowly. Time, 8 minutes 4 seconds.

Gohanna, after the heat, exhibited no sign of fatigue.

2d Heat.—Gohanna being distanced and Blenheim withdrawn, the competitors were reduced to Ariel and Monsieur Tonson. Ariel continued the favourite in spite of her discomfiture on the first heat. That discomfiture was ascribed to the mischance of the saddle.

According to the general opinion, this was the most beautiful heat ever witnessed. Until they entered on the quarter stretch of the last mile, there was scarcely a length between them. For the whole of the way, except a few hundred yards in the third mile, Mon. Tonson led Ariel, and for more than half a mile the two horses might have been covered with a blanket. The result was doubtful to the last—for so close behind was Ariel, so undiminished was confidence in her powers, and so little had she been pushed in the first heat, or in the first part of the second, that to the very last moment when it remained possible, the general expectation was, that she would take the heat. But the friends of Ariel were disappointed, and Mon. Tonson came out ahead, some fifteen or twenty steps, amidst a roar of applause excited no less by surprise than satisfaction. It was immediately conceded that he was a horse of first rate powers, and believed that he had rather concealed, than displayed the extent of his capacity. His victory over Ariel, has, perhaps, placed him on an equality with the most celebrated horses of the time. Mon. Tonson was rode by Bob Wooding. Time, 7 minutes 57 seconds.

Third Day.—Post stake a single four mile heat, \$500.

Mr. John Minge's b. m. Eliza White,	1
Mr. J. J. Harrison's s. m. Saluda,	2
Mr. Wm. R. Johnson's b. h. Lafayette,	3
Mr. James M. Selden's s. h. Mountaineer, dist.	
Time, 8m. 2s.	

NORFOLK FALL RACES.

The Norfolk Jockey Club Fall Races, over Christian's Course, commenced on the 18th inst. Five horses were entered for the first day, but only three started, two being withdrawn. Mile heats—\$10 entrance—purse \$200, won by Mr. George B. Garrison's s. f. Sarah Hope.

The following is the result:

G. B. Garrison's s. f. Sarah Hope, 4 years old,	1
James G. Green's s. c. Austin, 3 years old,	2
Thomas M. Bressie's b. m. Poggie, 3 years old, dis.	

Time of running—1st heat 1m. 4s.

Do do 2d heat 3m. 2s.

Second Day.—Mr. Garrison's b. m. Atalanta, 1 2 3

Mr. Wilson's b. h. Sir William, 2 3 3

Mr. Green's b. m. Isabella, 2 1 1

Time of running—1st heat 3m. 55s.

2d heat 3m. 52s.

3d heat 3m. 56s.

RECIPE.

NEW METHOD OF CLEANING SILKS, WOOLLENS, AND COTTONS.

The following recipe is recommended as a good method of cleaning silk, woollen, and cotton goods, without damage to the texture or colour of the same:

Grate raw potatoes to a fine pulp in clean water, and pass the liquid matter through a coarse sieve into another vessel of water; let the mixture stand still till the fine white particles of the potatoes are precipitated: then pour the mucilaginous liquor from the secula, and preserve the liquor for use. The article to be cleaned should then be laid upon a linen cloth on a table, and having provided a clean sponge, dip the sponge into the potato liquor, and apply it to the article to be cleaned, till the dirt is perfectly separated; then wash it in clean water several times. Two middle sized potatoes will be sufficient for a pint of water. The white secula will answer the purpose of tapioca, and make an useful nourishing food, with soup or milk, or serve to make starch and hair powder. The coarse pulp, which does not pass the sieve, is of great use in cleaning worsted curtains, tapestry, carpets, or other coarse goods. The mucilaginous liquor will clean all sorts of silk, cotton or woollen goods, without hurting or spoiling the colour; it may be also used in cleaning oil paintings, or furniture, that is soiled. Dirtied painted wainscoats may be cleaned by wetting a sponge in the liquor, then dipping it in a little fine clean sand, and afterwards rubbing the wainscoat with it.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 27, 1826.

The next meeting of the Trustees of the Maryland Agricultural Society will be held at Lexington, the residence of D. Williamson, jr., on Thursday, the 9th day of November.

A large pear, weighing 28½ ounces was left on the Editor's table this week.—It was grown in a garden about two miles from Baltimore.

SALE OF VALUABLE BOOKS.—An opportunity will be offered in Philadelphia on the 7th of November next, such as rarely occurs, of procuring choice and scarce books composing a private library of 6,000 volumes in the different departments of literature and the sciences; many of these books are European editions with fine engravings extremely rare and valuable. The sale will take place at the long rooms of Freeman, Son & Potter, on Tuesday evening, November 7, at 6 o'clock.

S. Potter, of the late firm of S. Potter & Co., Booksellers, Philadelphia, will be present at the sale of books, and will with pleasure purchase for those gentlemen at a distance who cannot make it convenient to attend.

A catalogue of this extensive collection may be seen on application at the office of the American Farmer, at the Exchange, or at the Baltimore Library.

LITERARY PRIZES.—The proprietor of the *Philadelphia Album* intends distributing the following literary prizes. The merit of the pieces to be decided by a committee of literary gentlemen of Philadelphia, viz:

For the best original Tale, fifty dollars in cash, or a gold medal of the same value.

For the second best original Tale, thirty dollars in cash, or a gold medal of the same value.

For the best original Essay, fifty dollars in cash, or a gold medal of the same value.

For the second best original Essay, twenty dollars in cash, or a gold medal of the same value.

For the best original Poem, not exceeding one hundred lines, thirty dollars in cash, or a gold medal of the same value.

For the second best original Poem, not exceeding one hundred lines, twenty dollars in cash, or a gold medal of the same value.

To be forwarded, free of expense, to Thomas C. Clarke, proprietor of "The Album and Ladies' Weekly Gazette," Philadelphia, as follows:—The Tales on or before the first day of December next—The Essays on or before the twentieth day of January next—and the Poems on or before the twenty-second day of February next, each article to be accompanied with a sealed note, containing the writer's name and address, which will in no case be opened, unless a premium be awarded to the writer thereof.

Editors throughout the United States are respectfully solicited to give the above one or more insertions.

COMMUNICATION.

Those who suffer from any derangement of the kidneys are recommended to abstain from porter, ale, or beer, and to make a free use of honey. *One who speaks from experience.*

FLORIDA INSTITUTE OF AGRICULTURE, ANTIQUITIES AND SCIENCE.

Sir, Tallahassee, March, 4, 1826.

The FLORIDA INSTITUTE OF AGRICULTURE, ANTIQUITIES AND SCIENCE, have elected you an honorary member.

This Institute has been formed by the citizens of the Middle District, for the laudable purposes of inquiring into, and unfolding the resources of this rich and flourishing Territory. The richness and fertility of our soil, the strong traces everywhere existing of a once dense population, of some unknown, but highly civilized nations, and a disposition to unfold the sciences, have all co-operated in inducing a belief, that such an association would develop the character of our soil, the remains of our antiquities, and the scientific researches of our citizens. If, sir, your inclination or leisure will permit you, to aid the society in any of the objects of its formation, you will derive an additional title to the respect and esteem in which you are held by its officers and members.

I have the honour to be, sir,

With high respect, your obed't serv't,

WM. ALLISON McREA,
Cor. Sec'y Flor. Inst. of Agric. Antq.
and Science.

JOHN S. SKINNER, Esq.,
Baltimore, d. }

OFFICERS OF THE INSTITUTE FOR 1826.

A. B. Woodward, President.
James Gadsden, 1st Vice President.
William P. Duval, 2d Vice President.
Achille Murat, 3d Vice President.
Byrd C. Willis, 4th Vice President.
Wm. Allison McRea, Correspond. Secretary.
George E. Tingle, Recording Secretary.
David B. Macomb, Treasurer.

Baltimore Post Office, 20th Oct. 1826.

I had the honour, but very recently, to receive your letter announcing my election as an honorary member of the Florida Institute of Agriculture, Antiquities and Science. Adverting to the names of its officers and the interesting objects of the Institute, the every view gratifying to be admitted a member, the mode by which I can most effectually cooperate in your labours, by offering the use of the "American Farmer," which circulates throughout the Union, and is published for the express purpose of unfolding the resources of our common country, and to show the productions and talents of each portion of it. Among the selected officers of your Institute, I have been steady friends of the cause, and I am now in the soil, ready to contribute to the success of the Institute.

worthy of being referred to only as evidence of the concern which is felt in the destiny of your flourishing Territory, and as an earnest of readiness to be instrumental in my humble way in the furtherance of all the views of your association. To that end, I beg to be honoured with the continued correspondence and commands of the Institute, and to offer to yourself, sir, the assurance of the personal respect and esteem with which I remain,

Your obed't serv't,

J. S. SKINNER.

WM. ALLISON McREA, Esq.,
Cor. Sec'y Flor. Inst. Agric.
and Science.

BOARDING.

Wanted, a few Yearly Boarders in the respectable and quiet family of a lady residing in town, for the education of her sons. The charges will be moderate. The residence is in one of the most convenient and healthy parts of the city. Not more than three boarders will be taken; and they must be of sedate and moral habits. For further particulars reference is made, by his permission, to Mr. J. S. Skinner, the Postmaster of Baltimore. Oct. 27.

PATENT PLOUGHS, STRAW CUTTERS, &c.

The subscriber now offers to the public three hundred well assorted Ploughs, all of Gideon Davis' Improved Patent, comprehending every size, from a small seeding to a large three horse plough; barshares well steeled to suit the most rugged and rocky soils, and cast shares of different shapes to suit the different soils that are free from rocks, &c. Also, Nos. 8 and 9, cast broad at the heel for very light soils, where the Cary Ploughs have generally been used. To prove the decided superiority of these Ploughs over all others in use, the subscriber would refer to those who have them in use for the satisfaction of those who are unacquainted with their merits. Also, Davis' Substratum, and Shovel Ploughs—and likewise Ryland Rodes' Patent *Hillside Ploughs*, on hand.

The demand for the subscriber's Patent *Cylindric Straw Cutter* for the last six months having been much greater than he had anticipated, many orders have been received which he was not able to furnish, but he would inform the public that he is now better prepared to comply with orders for these useful implements, which he warrants to be sufficiently strong, and to cut with facility hay, straw, cornstalks, and cornshucks.—Those who wish to drive them by other than manual power, will please to mention that in their orders, and the machines will be constructed particularly for that purpose. Also on hand, Brown's *Vertical Spinnners* for spinning Wool, calculated for family use; and one machine on the same principle running sixteen spindles, calculated for a small factory. Likewise, on hand, Enoch Walker's Patent *Wheat Fans*. All orders enclosing the money, will meet particular attention, and be the first supplied.

For sale one of the celebrated English *Horse Hoes*.—Also a box of very superior Indiana Oil or water Stones for carpenters' use.

JONATHAN S. EASTMAN,

No. 36 Pratt street, immediately opposite the United Hotel.

VENDUE.

By virtue of an Order from the Orphans' Court of Queen Ann's county, Maryland, I will expose to public sale, at the Farm called "Blakeford," near Queens-town, on Tuesday, 7th of November, next ensuing, all the Personal Property of Robert Wright, deceased. Oct. 27. ROBT WRIGHT, Administrator.

CONTENTS OF THIS NUMBER.

Curwen in reply to Columella revived, No. 2.—An Essay on the expediency and practicability of improving and creating Home-Markets for Agricultural productions and Raw Materials, by George Tibbits.—On gathering Fruit.—An Essay on the cultivation of Silk, by Gideon B. Smith.—Flowers.—Lockjaw in Horses.—Rules for ascertaining a Horse's age.—Tree Hill Races, Richmond Norfolk Fall Races.—New method of cleaning Silk.—Callan's Cottons.—Editorial Notices.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	6	10	9	12
BEES-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16½	17½	20	22
Havana,	—	15	17		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	28	30		
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	16
Dipt,	—	11	12		14
CHEESE,	—	8½	10	12	16
FEATHERS, Live, . . .	—	32		37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	5 50	6 00		
FLAXSEED,	bush	75	80		
FLOUR, Superfine, city,	bbl.	5 00	5 12	5 25	6 25
Fine,	—	4 75			
Susquehanna, superfi.	—	4 00			
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	50	55		
white	—	50	55		
Wheat, Family Flour,	—	1	1 10		
do. Lawler, & Red, new	—	95	1		
do. Red, Susque. . .	—	95			
Rye,	—	65	67		
Barley,	—	80	1 00		
Clover Seed, Red . .	bush	4 50		5 00	
Ruta Baga Seed, . .	lb.	87	1 00		
Orchard Grass Seed, .	bush	3 00		3 50	scarc
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	4 00		4 50	scarc
Oats,	—	50			
Beans, White, . . .	—	1 50	1 70	1 87	
HEMP, Russia, clean, .	ton	200	210		
Do. Country . . .	—	120	200		
HOPS, 1st sort, (1826)	lb.	28			
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	7			
Bar	—	7½	8		
LEATHER, Soai, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	46	50	62½	75
Havana, 1st qual. . .	—	30	32	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter .	—		75	88	
PORK, Baltimore Mess,	bbl.	11 00			
do Prime,	—	8 00	8 50		
PLASTER, cargo price,	ton.	3 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3½		5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	8½	8	10	12
WHISKEY, 1st proof, .	gal.	32	34	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	29		50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	9 50	10 75		
Louisiana,	—	9 25	10 00	10	11
Loaf,	lb.	19	22	20	
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	
Pepper,	—	16	16½	25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	46	47	78	
SHOT, Balt. all sizes, .	clb.	8 50		13	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	
do. Sicily,	—	1 10	1 15	1 50	
Lisbon,	—	1 05	1 10	1 50	
Claret,	doz.	4	8	5 00	
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinnners' or Pulled, .	—	20	25		

Printed every Friday, at 35 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOY, corner of B. Paul and Market streets, where every description of

AGRICULTURE.

THE ART OF BREEDING.

To JONATHAN ROBERTS, Esq.

President of the Penn. Agric. Society.

DEAR SIR,

In compliance with your request, I have presented for the Society, an account of my sheep.

I have never considered any race of sheep fitted for all the climates, soils and objects, of our vast territory, and I have endeavoured to show, that "particular breeds have been for ages retained in certain parts of Europe, where the shape of the animal has been made conformable to the purposes, to the climate, to the food, and face of the country upon which it has been reared. On the mountains of Scotland and Wales, on the bare chalk hills of the southern and western parts of England, races of sheep have always been bred, which by the lightness of their carcasses, and the activity of their muscles, are enabled to find sustenance, and by the closeness of their fleeces, are fitted to endure the exposure, which in mountainous regions must always be met. In the rich vales of Leicestershire, and highly cultivated marshes of Lincolnshire, and other counties in the north, families, the very opposite to these, have been as carefully bred, possessing heavy carcasses, long wool, shorter legs, very small bone, with the most sluggish dispositions, without either the desire or the power to make exertion to obtain food."

And with these impressions you will perceive I have not given up long woolled sheep, but have repeatedly ordered them from England, in addition to several imported parcels, which I had obtained here or in Massachusetts, more especially as I conceive combing wool essential to certain manufactures about to be introduced.

My success in crossing Tunisian long woolled sheep, with "BEANES' MIXED" family of Dishley blood, was sufficiently manifest in the fine rams, which you so much admired on their way to my friends in Maryland and Virginia. In crossing these animals of different breeds, BUT NOT OF DISTINCT RACES, both being of THE LONG WOOLLED RACE, I did not expect to obtain the good qualities of both, without the defects of either: I but hoped to procure the hardiness and fine mutton of Tunisian sheep, with some of the attributes, not of pure Dishley, but merely of "BEANES' MIXED" FAMILY of Dishley blood. I expected from mongrels, but the degree of excellence possessed by mongrels, until after a succession of years, by proper selection, and repeated crosses, I might have fixed certain varieties in one family, constituting thus an improved breed.

I might have pursued my object for many years without danger of breeding too closely in, even if I had begun with but two sheep. It is admitted by most of the opponents of breeding in and in, that with certain views the father may be united with the daughter—with the grand-daughter—g. grand daughter—and g. g. grand daughter; for the g. g. grand daughter is supposed to retain one-sixteenth of the blood of the original dam.

But a brother and sister should very rarely be joined, as they are both of precisely the same blood.

Much confusion has arisen from the want of proper technical language to convey the principles upon which the art of breeding has been established. The use of the words, family, breed, and race, indiscriminately, causes no little difficulty in communicating precise impressions on this subject: and to prevent cavil in the use of terms, I will endeavour to illustrate the acceptance in which they are taken by me.

I have called all the old "Bakewell" sheep a "mixed family," as they are mongrels derived from Beanes' importation of Dishley and Tecs-

water, * * * *, jumbled in most cases with Southdown, Irish, and common American sheep. The term family is used, to designate their close affinity in all cases; yet the absence of determined characteristics, denies to them the appellation of a "breed," which I suppose must be marked by points, properties, or general conformation so distinct, as to leave no hesitation in regard to immediate origin or descent.

But "race," I conceive, in the language of breeders, embraces many breeds; thus sheep are classed under the general terms "long woolled," and "short woolled race."

By the term "variety," I apprehend that breeders mean a product fortuitous, or the result of design, exhibiting peculiar characteristics, either in form or properties, or both, and which are so decided, as to prevent its being assigned to any known family, or particular breed.

New varieties are obtained by crosses—they are fixed by selection, and breeding in. When their blood has been commixed, and their offspring has been joined during many generations, with reference to the approximation of the individuals so joined to the points or properties desired, producing an union of their characteristic peculiarities, they are said to be established or fixed in one family, constituting thus an improved breed.

The first cross produces a variety called an half breed—the second, three-fourths—the third, seven eighths—the fourth, fifteen sixteenths, and so on. The variation of the blood in each cross is designated by figures to a certain point only, because there is a point where all sagacious breeders acknowledge, that the blood of the original sire or dam, is so nearly sunk or expelled, as to be little estimated, leaving them at that point, in possession of animals usually equal to pure blood.

If it were not received among breeders, whose experience has led to the conclusion—if it were not sanctioned by men, whose habits of investigation, and general knowledge, cannot fail to lead them to truth, it might be questioned whether an improved breed could be found, whose attributes could be retained without danger of some sudden transition destructive of all the objects, in the promotion of which, it had been sought. This position may be illustrated by the success which the breeders of dogs, and even of birds have attained.

The term "breeding in and in" appears to have been received by some writers in a different sense from that in which I apprehend it should be applied. I have considered Sir John Sebright's essay, published at the desire of the President of the Royal Society, decidedly the best which has appeared upon this subject, and in my impressions I am supported by Sinclair and Young, the one quoting Sebright in the "Code of Agriculture," the other establishing his positions in the "Survey of Sussex," by giving the highest authorities—facts, as well as the opinions of practical men.

By opposing "breeding in and in," Sebright does not intend to exclude the union of animals nearly allied, for he justly remarks—

"Mr. Bakewell had certainly the merit of destroying the absurd prejudice which formerly prevailed against breeding from animals, between whom there was any degree of relationship; had this opinion been universally acted upon, no one could have been said to be possessed of a particular breed, good or bad; for the produce of one year would have been dissimilar to that of another, and we should have availed ourselves but little of an animal of superior merit, that we might have had the good fortune to possess."

And he continues, that brother and sister may even be joined with certain views, "should they BOTH BE VERY GOOD, AND PARTICULARLY SHOULD THE SAME DEFECTS NOT PREDOMINATE IN BOTH, BUT THE PERFECTIONS OF THE ONE, PROMISE TO CORRECT

IN THE PRODUCE, THE IMPERFECTIONS OF THE OTHER." Yet he opposes its being carried so far, as some writers have imagined, it was pursued by Bakewell, whose practice has never been traced.

I have contended that the effects of breeding closely in are injurious; my practice, independent of any expression in favour of Sebright's doctrine, will determine that I do not object to the union to a certain point, of animals nearly allied.

One of my finest bulls (Malcolm) which I imported at the time I possessed many high bred males of the same breed, is derived from a cow begotten by Western Comet upon his g. g. grand daughter.

And that I am confirmed in this opinion by Mr. Coates, one of the oldest breeders of Great Britain, is evident in his declaring, that he has seen no bull which he would prefer to Malcolm as a sire.

The celebrated Knight—Mason—Rudd—Whitaker—Parkinson and Somerville, might be quoted in aid of that which has been advanced; but more pointedly to bring the soundness of Sebright's doctrine to your view, I would recall your own and your brother's experience in flocks of sheep made decrepid by too close adherence to the same blood.

I am yours, &c.

JOHN HARE POWELL.

Powellton, Oct. 5th, 1826.

NOTE.—(From Sinclair's Code of Agriculture.)

The art of improved breeding consists, in making a careful selection of males and females, for the purpose of producing a stock, with fewer defects, and with greater properties than their parents; by which their mutual perfections shall be preserved, and their mutual faults corrected.*

The objects of improved breeding, therefore, are, to obviate defects, and to acquire and to perpetuate desirable properties; hence, when a race of animals have possessed, in a great degree, through several generations, the properties which it is our object to obtain, and any tendency to produce unwished for properties, has been extirpated, their progeny are said to be well bred, and their stock may be relied on.†

It was upon this principle of selection, that Bakewell formed his celebrated stock of sheep, having spared no pains or expense, in obtaining the choicest individuals, from all the best kinds of long or combing woolled sheep, wherever they were to be met with; and it cannot be doubted, that any breed may be improved in the same manner, namely, that of putting the best males to the finest females. After a superior breed, however, has thus been obtained, it is a point that has been much disputed, whether it is proper to raise stock, 1. from the same family; or, 2. From the same race, but of different families; or, 3. From races entirely different.

1. *Breeding from the same family.*—This method is called breeding in-and-in, or putting animals of

* Sir John S. Sebright's Essay on the Art of Improving the Breed of Domestic Animals, p. 5 and 8. All breeding proceeds on the presumption, that the tendency of any individual animal is, to transmit to its offspring the form, constitution and qualities which it possesses; and as two animals are concerned in the production of one offspring, that one is expected to inherit, a form and constitution, compounded on the joint qualities of its two parents. Thus it is found, in numerous breeds of animals, as in deer, in the West Highland cattle, in the North Devon, and in the wild cattle of Chillingham Park, the offspring, for an indefinite number of generations, have borne the same general characters. *Observations by C. Mason, Esq., of Clifton, co. Durham.*

† Sir John S. Sebright's Essay, p. 7. Incessant care and attention, however, are necessary, to keep them up to the mark; and this rather fortunate than otherwise, since it perpetuates the merit of breeders, and the competition of stock.

‡ Young's Lecture, p. 3.

the nearest relationship together.* Though this plan was some time in fashion, under the sanction of Bakewell's authority, yet experience has now proved, that it cannot be successfully persevered in. It may prove beneficial indeed, if not carried too far, in fixing any variety that may be thought valuable,† but, on the whole, it is so only in appearance. Under this system, the young animal comes into the world, on, comparatively a very small scale. By keeping it fat from the first moment of its existence, it is made to attain a greater size than nature intended; and its weight in consequence will be very great, in proportion to the size of its bones. Thus a generation or two of animals of an extraordinary form, and saleable at enormous prices, may be obtained; but that does not prove that the practice is eligible, if long persisted in.‡ On the contrary, if the system be followed up, the stock get tender and delicate, they become bad feeders; and though they retain their shape and beauty, they will decrease in vigour and activity, will become lean and dwarfish, and ultimately incapable of continuing the race. The instances of this are numerous. The celebrated breeder, Prinsep, found, that decrease of size unavoidable, in spite of all his endeavours, by keeping the young stock well, to prevent it.§ Sir John S. Sebright tried many experiments by breeding *in-and-in*, with dogs, fowls, and pigeons, and found the breeds uniformly degenerate.|| A gentleman who tried the system with pigs, brought them at last into such a state, that the females gave over breeding almost entirely, and when they did breed their produce was so small and delicate, that they died as soon as they were born. Nay, Mr. Knight's experiments with plants have fully convinced him, that in the vegetable, as well as in the animal kingdom, the offspring of a male and female, not related, will possess more strength and vigour, than where they are both of the same family.¶ This proves how unprofitable such connexions are. That is no reason, however, why a breeder may not manage a particular family of animals to great advantage, by shifting or changing, instead of breeding directly from parents to offspring.** Hence the propriety of procuring males from the flocks and herds of those who have the same or a similar breed. It has been remarked, that those farmers have in general the worst flocks, who breed from rams produced on their own farms, and that an interchange of males is mutually beneficial.††

With respect to the doctrine, "that when you can no longer find better males than your own, then by all means breed from them, for that best can only beget best;" it is ably refuted by an intelligent author, who has devoted much attention to the art of

breeding. He observes, that there never did exist an animal without some defect in constitution, in form, or in some other essential quality; and such defect, however small it may be at first, will increase in every succeeding generation, and at last predominate in such a degree, as to render the breed of little value.* Breeding *in-and-in*, therefore, would only tend to increase and to perpetuate that defect; which might be eradicated, by a judicious selection from a different family in the same race.

2. The breeding from different families of the same race, is therefore a preferable system. When these have been for some time established in different situations, and have had some slight shades of difference impressed upon them, by the influence of different climates, soils, and treatment, it is found advantageous to interchange the males, for the purpose of strengthening the excellencies and remedying the defects of each family. On this principle, the celebrated Culley continued, for many years, to hire his rams from Bakewell, at the very time that other breeders were paying him a liberal price for the use of his own; and the very same practice is followed by the most skillful breeders at present.‡

HOME MARKETS—AGRICULTURAL PRODUCTIONS AND RAW MATERIALS.

(From the Memoirs of the Board of Agriculture of the State of New York.)

(Continued from p. 251.)

England, from the earliest times, supplied our southern states with coarse woollen cloths, called negro cloths. For a few years, the English were excluded from these markets by the late embargo and war, and manufactories for making cloths, as substitutes, were established in the New England states, and some in this state. At first, these cloths sold for about seventy five cents per yard; but at less, before the close of the war. At that time, they were met in those markets by large supplies from England, and they fell to below fifty cents. Orders were less frequent, or for diminished quantities, to England. The usual quantities continued to be made there, and accumulated. The market continued to be pressed with both descriptions of cloths. The price declined to forty, to thirty-five, and thirty cents. In 1823-4, an immense mass, probably the entire accumulated quantity in England, was sent out, and being still met by cloths made here, fell to twenty-five, twenty, and even seventeen cents. That operation broke down our manufacturers; they gave up the markets to the English, who, unless the tariff of last year shall prevent them, will again take the market at former prices. The cotton bagging manufacturers of Kentucky, I am informed, met a similar fate in the decline and fall of their establishments.

There are several sets of articles, particularly all those made from wool and cotton, which would be made here, to the extent of the home demand, if not for exportation. If assurances should be given that the present prices would be maintained, there is no want of capital; the requisite stock of artisans would soon appear. But adventurers in these pursuits are deterred, and dare not undertake them; partly from the apprehension, that the present protection, by way of duties, may be abated; but much more so, from a dread of the competition which they well know must ensue between themselves and the foreigners, who have hitherto supplied the country with these articles. The consequence to the farming and landed interest is, that the wool is grown in foreign countries, instead of this, to clothe about all the rich and fashionable part of the community, and even labourers and ser-

vants. The provisions and bread-stuffs required to feed the artisans, while converting these articles into manufactured and saleable goods, are also supplied by foreigners. The consequences to the country and treasury are, that we are thereby disabled to pay for, and import, other articles which we want; and should, in that case, import, to the full amount of all we could and should make of these. In this state, we have now more than five hundred thousand persons clothed in the woollen and cotton goods made in foreign countries, and of foreign raw materials, except part of the raw cotton. The importations of woollen and cotton, exceed sixteen millions, and the consumption, fourteen millions; and the proportion of our people who consume them are immense.

These particulars are stated, to illustrate the position, that manufacturing establishments, commensurate with the wants of the community, cannot for a long time be expected to rise in this country, unless they are shielded and protected in their infancy by government, and that they may, with that protection, some of them soon be expected to rise, without prejudice to the treasury, or the consumers of foreign goods, except, perhaps, a temporary rise in their price at the commencement. By gradually taking up and protecting particular articles in succession, such as could probably be supplied in the country, the whole would be ultimately taken up, protected, and made at home. Wool, cotton, and hemp, may claim the preference at present; afterwards, iron, steel, and other goods; from time to time, until the whole catalogue of foreign manufactured articles are included. The farming interest and receipts into the treasury would, at every step, be found to be promoted and advanced. The farming interest would soon find a home consumption, and home markets for all their productions; and in these, irresistible inducements for further improvements in their modes of cultivation. The capacity of the country to pay for larger quantities of the foreign articles, still remaining to be imported, charged with the payment of duties, would fill the treasury to overflowing.

I am aware that I have given but a very inadequate view of the embarrassments and difficulties which attend the commencement of manufactures in countries where the arts have been neglected. It is not so much from the want of hands, such as they are, or from the want of capital, that manufacturing is not commenced, as from the absence of the arts, and professions; or some one, or all of them, upon which a particular branch is dependent. The unskillfulness of workmen, and want of competition among them; and above all, the powerful, but inevitable competition, which the new beginner must meet with in the foreigner, who has before supplied the market. These difficulties and discouragements, in the commencement of manufactures, are altogether such, in regard to many of them, as the uniform experience of every country has found it impracticable to overcome, without the aid of the powerful shield of government to protect them against foreign competition, in their infancy.

My recollection may fail me in an attempt to suggest the numerous objections which have been urged, against granting the protection to manufactures required of government, or the different interests and professions, by whom they are made.

Among others, it is held, that the country is not capable of furnishing the necessary stock and variety of raw materials; and, in particular, that it cannot supply the wool for woollen manufacture.

That a certain loss of revenue derived from imports, must be sustained, and direct taxation, to make good the deficiency, must be a consequence of this protection.

That we have not the hands to supply the demand for the wool, and profitable employment

* It having been found, that this system produced animals quite deficient in vigour, those who are now possessed of a capital stock, keep two or three streams of blood, quite distinct, that they may avoid a consanguinity.

† Sir John S. Sebright's Essay, p. 13. Paper by Henry Cline, Esq., Comm. vol. iv. p. 442.

‡ Paper by T. A. Knight, Esq., Comm. to the Board of Agriculture, vol. ii. p. 185. These dwarfish males, however, may not have an injurious effect on the stock of another person, especially the first cross, if the females be of a coarser quality, and, on Mr. Cline's principle, they are of a larger size than the males put to them.

§ Paper by T. A. Knight, Esq., Comm. to the Board of Agriculture, vol. ii. p. 185.

|| Sir John S. Sebright's Essay, p. 13.

¶ Paper by T. A. Knight, Esq., Comm. to the Board of Agriculture, vol. ii. p. 186.

* Husbandry of Scotland, vol. ii. Appendix, p. 109. The same rule holds good regarding the human species. By a train of unfortunate circumstances, a brother and sister german, ignorant of their blood connexion together, were married. Their children all died before they were a year old.

* Sir John S. Sebright, on improving the Domestic Animals, p. 11 and 12.

that Congress are not authorized to grant the required protection, by taxing the many for the benefit of the few; nor to cherish and elevate one class, to the prejudice of others, and particularly the shipping interest, which is already established, and in successful operation—the danger of smuggling; the destruction of all regular commerce; the demoralizing influence of manufacturing establishments; the great and unnecessary injury to the farming interest, as it would be at their expense, more immediately, that the required protection must be granted—that manufacturers do not require further protection; they are doing well, and will increase as fast as the welfare of the country requires; and it is held by the cotton, sugar, and tobacco-growers, that it might excite the displeasure of England, and that, by way of retaliation, she may shut out their commodities from her markets. Many of these objections have been answered and refuted, satisfactorily to my mind, still it may not be improper, at this time, briefly to notice some of them.

In regard to the capacity of the country to furnish the necessary quantity of wool.

It is said that wool cannot be grown in this country, in sufficient quantities to clothe its inhabitants. This is evidently erroneous. The only reason why wool has not heretofore been grown to any considerable amount is, that there has been no steady or efficient demand for it. The demand during our late war was great. Before that time, it was next to nothing, compared with other kinds of agricultural produce. During the war, and embargo, the quantity of wool raised, was very much increased; and if the growers and manufacturers of that article then, in this country, could have been defended from the interference of foreigners, and foreign wool, in the shape of woollen cloths, had continued to be excluded; before this time, the quantity of wool raised, would not only have been equal to clothing the entire population of this country, but by necessary competition, the quality would have been improved, and its price reduced to the proper level, or below it. At the close of the war, however, the country was again inundated with foreign wool, in the shape of woollen manufactures; which had the preference to cloths made here, by our half learned artists. The consequence was, that our new beginners in the manufacture of wool, were broken down and ruined. Wool could not be sold at hardly any price. Sheep became useless to the farmer; and the flocks of sheep were killed off by thousands, and their carcasses thrown to the hogs. The flocks of sheep were destroyed in this summary way, or by peddling them about in our markets, at from fifty, to seventy-five cents per head, until the number was reduced to the demands of a part of our farmers, for the coarse fabrics made in their families, for their use. The farmers have, however, lately, again slowly, and cautiously increased their flocks, apprehending in the mean time, another defeat, by some caprice of government, or change of times. The small addition to the tariff of last year, has increased that confidence. The flocks are now again more carefully attended to, but the price of wool may soon again decline, unless the duties on imports are further augmented, so as to draw into the country, or grow up in it, a sufficient stock of artisans, to make and supply all the woollen goods required in the consumption of the country; and unless this stock of artisans shall be enlarged, and manufactories of the article established, commensurate with the demand of the country, another slaughter and destruction of sheep may be expected.

It is maintained, that no further protection ought to be provided for manufactories, because the revenue derived to government from duties payable on importations, will thereby be diminished, and direct taxation resorted to, as a necessary consequence of this protection.

If the reverse of this anticipation is not evident

at first view, it is, nevertheless, beyond all question true. It may be taken as a general rule, that every nation imports commodities from abroad, of some sort, to about the amount which it is convenient for it to pay for, and beyond its ability to pay, it cannot for any length of time continue to import.

In England, all, or nearly every manufactured article, together with bread-stuffs and provisions, are directly, or virtually prohibited. There still remains, however, even to England, a vast amount to be imported. All the articles whose growth requires a warmer or tropical climate, or which cannot be conveniently raised, or the value of which may be further augmented by the labour of her artisans. The raw silks, oils and fruits of Italy; the cotton of our southern states; the sugars, spirits, dye-stuffs, and fruits of the West Indies; the wines and fruits of Spain, Portugal, and other wine-raising countries; the teas of China; the hemp, flax, iron, and furs of Russia and Sweden; the timber and peltries of Canada and Norway, and a multitude of other articles. Her importations of some sort, taken in the aggregate from all the countries from which she imports, must, in the long run, equal, or thereabouts, her exportations; or she would no longer derive any benefit from her exportations; other nations having nothing which she wanted, or would take in exchange. The question is, is she, by manufacturing, thereby enabled to import more; the duties payable upon which, shall be productive in like proportion, to the smaller quantity, to which, without manufacturing, she must of necessity have been limited?

It is contended that she is thereby enabled to import more; and to illustrate this position, the trade of England is referred to, when that nation did not manufacture more than this now does, when she sent her wool, raw materials, &c., to Flanders, and other countries, and received cloths, and other manufactured articles in return; a practice which she continued for many centuries; in either of which, or even in half a century, by adopting her present policy, she might have greatly enlarged her number of people; ten folded her revenue from duties, and raised the nation to a state of the most enviable prosperity.

By reviewing the history of the manufactures and trade of England, it will be found that, at the commencement of the reign of Queen Elizabeth, her revenue derived from customs, or duties, on all the imported articles, amounted to but 14,000*l.*, yearly. The measures adopted by that Queen, and her excellent minister, Cecil, in protection of the manufactures and trade of her people, raised the revenue from this source, in her time, to more than 50,000*l.*, and from these plain reasons, that her nobles, prelates, and gentry, consumed larger quantities of home-made, instead of foreign articles; and her people were thereby enabled to earn more money by making them, and to import and pay for a greatly increased quantity of foreign articles, still remaining to be imported. For these facts and results, Anderson's History of Commerce, for the reign of that Queen, is referred to.

Although much was done during the reign of that monarch, the trade and manufactures of England in the succeeding, as in the former arbitrary reigns, to the revolution, underwent many fluctuations. From that time, the laws and regulations relating to manufactures and trade, could be no longer altered or changed for political or monied considerations, by the arbitrary proclamations of the King. Monopolies were put down, further prohibitions of manufactured articles were enacted or enforced by severer penalties, until every foreign manufactured article which could be made at home, was virtually excluded, by direct inhibition, or high duties. And it is worthy of remark, that, as foreign manufactures was excluded, the receipts from duties on importations augmented, until 1822, they amounted to more than 11,000,000*l.* These results are found

to follow from the like causes, in all the countries whose statistical records have been examined, and prove, it is apprehended, conclusively, that the revenue of a country, and particularly of this country, derived from duties on imported articles, may certainly be augmented, by gradual diminutions of the importations of manufactured articles from abroad. But these results may be further illustrated by the experience of this country in the article of coarse cotton cloths. Before the commencement of the late war and embargo, immense quantities of coarse cotton cloths were imported from India and England. Importations were suspended by the war and embargo. During the war, the article being in great demand, manufactories were established, and commenced their operations. At the close of the war, the country was again inundated with India and English coarse cotton cloths. These foreign cloths, meeting those made here in our markets, the market was overstocked, and the goods sold at such reduced prices, that the works in this country were stopped, and the owners, many of them ruined. Congress, however, increased the duty upon this article, for their protection. From the quantity in the market, the effect of this duty was not immediately felt.

But further importations ceased. Under the faith of this protecting duty, however, the cotton mills were again put in operation, and, as the manufacturers became better acquainted with their business, and from the competition which ensued among them, the country is abundantly supplied with the article, at a much less price than it was formerly imported. The country is not only supplied, but overflowing the demand at home; it has at this time become a great, if not the best and surest article for exportation which we have. The coarse cotton cloths of this country now have the preference in the South American markets, over the cloths of England made for like purposes, and it bids fair to supplant them in all foreign markets, where the cloths of both countries find admittance and a market.

By protecting the manufacturers of this article for a short time, (who are good customers for our bread stuffs and provisions,) from the interference of foreigners, the continual drain of money to England and India, was not only stopped, but it now enables us to import more of the articles still remaining to be imported, to the full amount of all we export of this. And it is found that we still import of these other articles to the full amount of all we are able to pay for, and the rate of exchange remains very much against us.

While on the subject of the manufacture of cotton, it may be useful to consider the rise and progress of the manufacture of this article in England. Before the English prohibited the importation of cotton goods, they were imported from India and sold at about one third the cost of making them in England. It was seen, that under such discouragement, her new beginners would be driven out of the market, and probably never become workmen at the trade. She wisely excluded these foreign cheap goods; secured the home market to her raw hands, and gave them the fullest opportunity to become adepts in the art; the consumers in the mean time, paying more than double the price, at which the like goods could be had from abroad. The consequences resulting to England, are, that she is now at the head of that art, while none of the raw materials are raised in that kingdom, but every fibre of them imported from abroad. At this time, or in the year 1823, as appears from a statement in parliament, by Mr. Huskinson, her manufacture of the article, amounted to 54,000,000 pounds sterling, or about 240 millions of dollars—her exports of the article, to 22 millions sterling, or about 98 millions of dollars—the number of families employed in this business, 500,000. Her exports of this article alone,

HORTICULTURE.

LARGE TREES.

Chardin, the traveller, tells us that in the King's Garden at Shiras, (in Persia) "he observed a tree whose trunk was *eight yards in circumference*.—From the great age of this tree, it was treated with peculiar veneration by the inhabitants: they pray under its shade, and hang chaplets, and pieces of their cloths upon its boughs. The sick, or their friends, resort here, to burn incense, to fix lighted candles to the trunk, and to perform other superstitious ceremonies, in the hopes of their health: Throughout Persia, are many other trees thus superstitiously revered by the people."

"The Charter Oak," in Connecticut. "From the best information that we can obtain," says a Hartford paper, "this tree is no less than four hundred years old: it is *twenty-eight feet in circumference* near the ground, and at the height of seven feet, it is 17 feet in circumference; the height of the tree as near as can be ascertained, is about 70 feet; some of its branches extend nearly 20 feet."

In May, 1826, there was an Elm blown down in Wells, (Maine) which "measured *twenty-seven feet and four inches in circumference*, making the diameter something over nine feet; and was forty feet from the foot to a crotch; from thence it was 20 feet to the first limb running to the height of sixty feet from the bottom before it had any limb, when it expanded to an immense size. The exact height of the tree could not be accurately obtained, as the top was much broken, but was computed to be upwards of one hundred feet."

"An elm tree standing near the house of Captain Joshua Avery, in Stratham, (Mass.) and reared since his recollection; at four feet from the ground, measures *eighteen feet in circumference* and one hundred feet from the extremity of the branches on the one side, to the extremity of them on the other. It was planted 80 years ago; and to use Captain Avery's expression, was then 'smaller than his thumb.'"

Mr. Nelson, the botanist, who accompanied Captain Bligh to the South Sea, for the purpose of conveying the Bread-Fruit Tree to the West Indies, when on Van Dieman's Land, "found a tree in a thriving state, of the enormous size of *thirty-three feet and a half in girth*, and at a proportionable height."

In Cook's first voyage, Sir Joseph Banks and Dr. Solander, (I think it was in New Zealand) measured a tree that was "*ninety-eight feet high from the ground to the first branch*, quite straight, *nineteen feet in circumference*, and they found still larger trees as they advanced into the wood."

On Mr. Cook's third voyage, they saw Indian canoes on the north west coast of America: "the largest of which carry 20 persons or more, and are formed of one tree. Many of them are *forty feet long, seven broad*, and about three deep."

We are told in the narrative of Gov. Phillip, in his voyage to Botany Bay, that on Norfolk Island, "the pines arrive at a magnitude unusual in any other part of the world: some of them are *one hundred and sixty, or even one hundred and eighty feet in height*, and *nine or ten feet in diameter* at the bottom of the trunk. They frequently rise to *eighty feet without a branch*."

The Elm in Hatfield, (Mass.) is said to be the largest tree in New England. "It measures in circumference *thirty-four feet at two feet from the ground*; at the height of five feet the smallest place in the trunk, the circumference is *twenty-four feet six inches*. There is a cut in the tree four feet from the ground, which tradition says, was made by the Indians, for the highest rise of Connecticut river."

The largest tree in Great Britain, that I have ever read of, is the one cited by Smellie, in his Philoso-

phy of Natural History; which was growing at Cowthorpe, near Wetherby; upon the estate belonging to the Right Hon. Lady Stourton. "The dimensions are almost incredible. *Within three feet of the surface it measured sixteen yards*, and close by the ground, *twenty-six yards*. Its height in its present ruinous state, (1776) is about eighty-five feet, and its principal limb extends *sixteen yards* from the boll." "When compared to this, (says Dr. Hunter) all other trees are but *children of the forest*."

The following account of the celebrated horse Chesnut of Mount Aetna, is from Brydone's Travels: "leaving the Catania road on the left, they began to ascend the mountain, in order to visit the celebrated tree, known the name of the Chesnut Tree of an hundred Horse, which for some centuries has been regarded as one of the greatest wonders of Aetna."

"At the end of the first region, the ascent became more rapid, till they arrived at the beginning of the second region of Aetna, called La Regione Sylvana, by the natives, because it is composed of one vast forest that extends all round the mountain. [The woody region of Aetna ascends for about eight or nine miles, and forms a zone, or girdle, of the brightest verdure, all round the mountain.]—The same author.

"Near this place, they passed through some beautiful woods of cork and evergreen oak, growing out of the lava; and proceeding about five miles farther, they came to the chesnut tree already mentioned, which, in the old maps of Sicily, always makes a conspicuous figure. Mr. Brydone says he was rather disappointed, as it appeared rather a cluster of five trees growing together, than a single root; however, he was assured that they were all once united in the same stem, and that in the days of old, it was regarded as the beauty of the forest, and visited from all quarters. *It measured no less than two hundred and four feet in circumference*; and if, as it is pretended, it was formerly one trunk, it must, indeed, have been a wonderful phenomenon, in the vegetable kingdom. There are many other trees in this vicinity, of extraordinary magnitude. Our author measured one which rose in a solid trunk to a considerable height, that was not less than *seventy-six feet in circumference at two feet from the ground*."

The Lexington (Ky.) Public Advertiser says, that "there now stands on the bank of the Ohio river, in the state of Indiana, opposite the mouth of Salt river, a Sycamore tree, which has stabled fourteen head of horses at one time, with ample room. It takes 75 long paces to go round its trunk, and you may, with perfect ease turn a fourteen foot pole in the inside of its cavity."

In Lewis and Clark's Expedition, they saw pine trees, at the mouth of Columbia river, of *twelve feet diameter and two hundred feet high*.

The above trees have all grown within the temperate zones, and with the exception of that in Great Britain, between the latitudes of 30 and 42°.

LARGE VEGETABLES.

From many of the floating paragraphs in the newspapers, (says the Richmond Compiler) it would appear that the present has been a remarkable season for vegetable curiosities and growths.

A Mr. John Griggs, of Jefferson county, in this state, has raised upwards of 40 bushels of potatoes, a purple colour, from the planting of three pecks: most of them had grown to the length of 7 or 8 inches, and 6 or 7 in circumference; one measured 18 inches long and weighed 2 lbs.

Mr. Caleb Davis of Clarksburg has raised in his garden three pumpkins; one weighing 136 lbs., and 6 feet 4 inches in circumference; the second 118 lbs., and the third 100. "We have repeatedly heard (says the recording Editor) of large squashes,

cucumbers, sea-serpents, &c. &c., but we think we can out pumpkin all of them." Rather an unfortunate phrase for an Editor; a "pumpkin-headed person" being an epithet not in much odour.

A gentleman in New London, near Lynchburg, has raised a tomato 2 feet and 3 inches in circumference.

A radish was raised in the lower end of Bote-tourt county, measuring 36 inches in circumference—another in the same neighbourhood, 32½ inches. "These are the largest (says the Fincastle Editor) that we have ever heard of."

A Raleigh Editor is unable to match it. He states that a Mr. Daniel J. Miller has raised one weighing 154 lbs., and measuring 36 inches in length, and 21 in circumference. "Beat it" (says the Raleigh Editor) "if you can."

Of the fruit furnished at a late public dinner in Roxbury, Mass. were apples, which were over 15 inches in circumference, and weighed from 20 to 23 ounces each. A gentleman has filled a barrel with 110 apples gathered from a tree in Newtown. These mammoth apples have been more common than usual, during the present season. They are called the *king pippins*. We invite our confectioners to send for some apples of this description. They will certainly reward them handsomely for their trouble.

Mr. L. S. D'Lyon has presented to the office of the Savannah Republican two ears of Indian corn, the production of a single stalk, containing 1140 grains on one ear, and 1020 on the other. "There are 14 acres which it is believed will average the same ratio."

A Mr. James Rainey near the town of Milton, N. C., has deposited at its Post Office, a corn stalk, with seven well filled ears of sound corn. He has accompanied it with the following pleasant note:—

September 12, 1826.

Mr. Campbell—I herewith send you a stalk of corn, which grew in my field on Hyco this season, with seven ears on it—If the ears are not *rank and good* like those seven ears on the stalk seen by Pharoah in his dream, they are, as you may see *good, sound, well filled grain*. The length of the seven ears, taken together, make three feet and five inches. Though we do not with Pharoah's Interpreter, consider this as a sign for seven years of plenty in our land, we certainly see in this prolific stalk, a striking contrast with what we hear of the crops of corn a few counties below us, where we are told there are many large fields not having in the proportion of one ear of any description to an hundred stalks.

JAMES RAINEY.

Still the *Charlottetown cucumber* eclipses all the other vegetable curiosities of the season. One of them seems sufficient to feast a company of soldiers. We should like to see its seed scattered.

RURAL ECONOMY.

OBSERVATIONS ON BRICKMAKING,

Extracted from a Compendium of Modern Husbandry, by James Malcolm, of London—2d edition.

Large quantities* of bricks are annually made in different parts of the county of Surrey, and particularly near the metropolis. The manufacture has of late years become an object of revenue, and as such entitled to some consideration;† the manufacture is besides of the utmost importance to the community, inasmuch as the value and comfort of our dwellings must depend in a great measure on the quality of the materials with which they are constructed, and bricks form no inconsiderable part of

* During the years 1821, '22 and '23 (on an average,) one billion and twenty millions were made annually.

† The duty paid to government is 5s. sterling, or about one dollar and eleven cents per thousand.

them; I say it is material, because if the bricks with which houses are now almost uniformly built, are in quality defective, and if the timber be of a similar description, we ought not to place much dependence on the solidity of the edifice.

Bricks ought to be made of well tempered clay, and one brick made of such takes up nearly as much earth as a brick and a quarter made in the common way; the latter of which are light, full of cracks and lumps, and springy, owing to the want of due working and management. The operation of treading and tempering ought to be performed more than doubly what is usual, because the goodness of the bricks (next to being properly burnt,) in some measure depend upon the well performance of its first operation, and as I think I have before shown that it is impossible that a house can be dry if the bricks that are used are insufficiently burnt—such as the salmon bricks which I have before described: therefore, a person about to construct a house, will do well to consider whether it will not be more advantageous to him in the end to make use of no other than the best hard, sound bricks, be their cost what it will; such bricks are easily known by their sound. It will also be found that besides the comfort and firmness of the building, they will be cheaper than salmon ones, when the expense of buttering the walls is taken into the calculation; and the latter kind cannot fail of producing an almost perpetual moisture, and make a house damp and unhealthy at nearly all seasons.* I shall conclude my observations on this subject by remarking, that I do not think it worth my while to waste time in refuting the sophistical and absurd reasoning of brick makers in general, in defence of the ordinary kind, and which they make use of merely to effect sales of an article which, if persons (who are building,) would study either their health or interest, they would hardly receive as a gift; indeed I have often thought that government ought to interfere and prohibit the use of them entirely. This would compel the makers either to be more careful when baking them, or place them a second time in the furnace.

[We cannot better meet the views of the writer of the following than by the publication of his letter which is clear and explicit. We shall be much obliged by any gentleman who will communicate his knowledge on the points in question, as also, for hints on the structure of ice-houses.]

DEAR SIR, *Wicco Church, Va., October 20, 1886.*

Not knowing who to call on, that I could so like to procure the information required from, as yourself, I will take the liberty to solicit from you some information as to the advantages, if any, which gas oil has, when applied to the roofs of houses, over tar.

The covering of our houses in this section of country, generally, is chesnut shingles; and it has been found that tar only, if without oil, is rather an injury than a benefit by causing the shingle to curl up, and, so far from penetrating into the shingle, it shortly washes off, and to mix oil sufficient with the tar to cause it to penetrate the covering, would render it too high.

I have been informed that a shingle dipped in gas oil will not burn when introduced into the fire,—if this be true, it renders the covering much more valuable. I should be glad to know the cost of the gas oil per barrel, and your opinion of the advantages when applied to the roof of houses. I have also found in this section that there is a great deal of gas oil used in the painting of houses.

How pretty well ascertained, and almost generally, by the gentlemen of science, that the dry weather, associated by the moisture that is abundant in the atmosphere, is a very healthy condition.

tained on the sides and ends of houses for several years without but little defect, and in some cases will not rub off more than paint. There are various modes of preparing this white-wash, although all is made from oyster shells fresh burnt, and before slaked, some apply boiling water to the shells and salt,—others cold water, alum, &c. If you are in possession of information which would enable me to fix upon a plan to make this white-wash to stand and not peel off I shall feel myself much indebted to impart it; together with any hint which you may be pleased to drop as to the properties of the first mentioned article, *gas oil*, be pleased to excuse the liberty I have taken, and to be assured if an opportunity should occur it will afford me pleasure to reciprocate your favour. Respectfully yours, &c.

THOMAS BROWN.

LADIES' DEPARTMENT.

FLOWERS.

[Ladies who take pleasure in the study of floriculture will do well to bear in mind the following explanation of the botanical terms which are used to describe the component parts of a flower, viz:]

1. The peduncle, is the foot-stalk of a flower, proceeding from the main stem, and supporting the corolla, as in the auricula, polyanthus, &c.
2. The calyx, or flower cup, the part which guards and supports the corolla, as in the carnation, pink, &c.
3. The corolla, the flower or blossom, properly so called, consisting of one or more petals. When this is entire, it is called monopetalous, or a corolla of one petal, as in the auricula and polyanthus; but when it is divided quite to the base, into two or more parts, each part is called a petal; thus the tulip is said to have six petals; in double flowers they are extremely numerous, and the corolla of such may be termed polypetalous.
4. The petal, or single floral leaf.
5. The unguis, or lower, long, narrow part of a petal, called the base or claw.
6. The lumina, or upper, broad, spreading part of a petal, called the plate.
7. The limb, border, or upper broad spreading part of a monopetalous corolla.
8. The tube, or lower, narrow, tubular part of the same.
9. The stamen, stamens, or stamina, if more than one, consists of two parts, viz: the filament, and the anther, or summit, which it supports.
10. The anther, contains the pollen, or farina.
11. The pericarpium, or seed-vessel.
12. Radix, the root.

[Florists' Directory]

WOMAN.

"Daughter of God and Man."
(From the Charleston City Gazette.)

There is a language of the heart
That mocks all learning's studious art
There is an utterance of the soul
That laughs at scholarship's contrivance
Breathes forth in verse a living thought
With feeling, love, and nature fraught
Woman's the theme; and who would e'er
One borrowed string to animate her

There is a witchery that
Within the sunshine of her eye
More potent than the magic spell
Of talisman, or enchanted well
Who has not felt her soft appeal
Inspire his heart and thrill his soul
Idolatry! the frowning gods
Who have loved mortal man

Have twined their influence round his heart,
Felt not that woman can impart
By smile, or glance, or smothered sigh,
A world of bliss and constancy.
Priestess of Love! how oft thou'rt left to mourn
Man's perfidy—forsaken and forlorn.

There is a vigil in the sky
That marks the villain's perjury;
How can he hope to be forgiven
Who breaks on earth his vow to Heaven?
He wedded in this world may be,
But hell like his inconstancy,
Will echoing yell the oath that fires his breath,
And brand it in the registry of death.

Pleasure's a poor and gaudy toy,
A forgery on solid joy,
A gilded chain that drags the slave
Helpless and childless to the grave.
The haunted Libertine who lies
Without one hand to close his eyes,
Sighs to the passing breeze his dying groan
Companionless, unwedded and alone.

Man has a wandering heart—his soul
Spurns fetters, slavery, and control:
To-day he climbs the snow-clad steep,
To-morrow ploughs the foamy deep:
And now he roams by mountain side,
Without a friend, without a guide—
Till woman bids his wayward steps to cease,
And turns his Arab thoughts to home and peace.

Woman! companion of my life,
Less loved when maiden than when wife;
How fondly do I sing to thee,
Of wedded love and constancy!
Dear mother of my child, I trace
Thy emblem in her artless face—
I clasp the lisping babe, receive a kiss,
And feel a father's love, a father's bliss.

'Tis woman's voice, in accents low,
That hushes first the infant's woe;
'Tis woman's fond, maternal arms,
That shields her boy from vain alarms—
Upreads him in a world of cares,
And saves him from its countless snares.
Nurse of mankind! I fondly view in thee,
The watchful guardian of our infancy.

Now would I woman's friendship sing—
O, 'tis a pure undying thing!
The dew that gems the blossom'd thorn
Shines brightest in the sunny morn;
But faithful woman can bestow
A light to gild the night of woe!
Her love, like moonbeam on a stormy sea,
Sheds o'er our cares its own serenity.

I've found the world a faithless thing—
Man's friendship weak and perishing,
Man's friendship! 'Tis the ocean's spray—
The froth that rude winds sweep away!
You ask where constancy can rest?
Go, find it in a woman's breast!

I would not give one fair, lov'd friend, I boast,
For all the wealth of India's golden coast!

When pale disease, with all her train,
Feters the blood and fires the brain
'Tis woman's sympathetic art
Quells the wild throbbings of the heart
The mortal pang, the burning sigh,
In nature's latest agony!

O, fair physician! thou art true and good,
With oil and wine the drooping frame

I ask not, on the bed of death,
Proud man to watch my fleeting breath
Let woman's prayer embalm the soul
For O, it has a soothing power,
To calm the awful struggle here
To brighten hope and banish fear—
To show prospects of a land on high

To show prospects of a land on high
To show prospects of a land on high

SPORTING OLIO.



WASHINGTON RACES.

The fall races over the Washington course commenced on the 25th inst. Only two horses were entered. Four mile heats, for a purse of \$300.

The first heat was won, in handsome style, by Mr Stevens' mare Janet, of New York; and at the second heat her opponent, Mr. Elliot's fine mare, Eliza White, of Virginia, was withdrawn. They are both first rate racers.

Second Day.—The race of yesterday was highly interesting. Four horses started for the purse; some of them were known to fame, and on one or the other of these, the majority of the betters made their calculations of success; but great was the disappointment. Sally Hope, whose name was unknown to the turf, withal too modest to inspire confidence or fear, offered herself amongst the competitors for the prize.

At the word "go," she took the lead, and was permitted to keep it throughout, without being pressed, her calculating adversaries moderately training in her rear, supposing the first heat would exhaust her wind, and leave the victory to him who should show most speed and bottom in the following heats.

At the tap of the drum, all four came up fresh to the second heat. Miss Hope again took the lead; she kept it the first round—every eye was directed to her competitors, confident that some one of them would make an effort to wrest the heat from so obscure a rival, and maintain their well-earned reputation. At this moment the gallant, or rather ungallant, young Fairfax, sprang forward and passed her. He kept the lead half a mile, when his fleet adversary shot ahead of him, and took the second heat also, to the surprise of every body and the dismay of the too knowing ones. The following is the order of the two heats:

Mr. Garrison's s. f. Sally Hope,	1	1
Mr. Potter's s. c. Fairfax,	2	3
Mr. Badger's b. c. Trumpeter,	3	2
Col. Sewell's b. c. Sir Humphrey,	4	dist.

Time of second heat, 3 minutes 52 seconds. The weather was very fine and the course in good order.

Third Day.—Five horses were entered; the purse \$200. The following is the result:

Eliza White, by Sir Archy,	1	1
Southern Eclipse, by Northampton,	2	dist.
Atalanta, by Chance,	3	2
Oscar,	4	dist.
Hickory,	5	dist.

The public were surprised, from the known speed and bottom of Southern Eclipse, to find him distanced this day, the second heat; but we learn he was out of order, and that the rider was directed to lay back the second heat, under an idea that Atalanta would run for the heat—and the boy did so, but out of distance, which Atalanta only saved and Eclipse lost by a length.

Fourth Day.—The sweepstakes of Saturday produced a protracted and interesting contest between the three fine horses that started. These were Eliza White and Sally Hope, (the winners of the preceding days,) and Fairfax. Four heats (of two miles each,) were run before the victory was decided, and furnished unusual gratification to the lovers of the turf, notwithstanding the very unfavourable state of the weather, and consequent heaviness of the course.

The first heat was a very handsomely contested one between Sally Hope and Eliza White, and was

taken by the former by a neck; Fairfax trailing in under a hard pull. Time, 4 min. 6 seconds.

The second heat was taken by Fairfax, with ease—Eliza White second and Sally Hope near at hand. Time 4 min. 1 second.

The third heat (Sally Hope being withdrawn,) was a fine trial of speed between Eliza White and Fairfax, they passing and repassing each other alternately, but was gained by the former by a length. Time 4 minutes 8 seconds.

The fourth heat and the race was taken by Eliza White, who took the lead, Fairfax coming in about a length behind. In this heat both horses were much distressed by the mire and slippery state of the track; both, however, proving game to the last. Time, 4 min. 16 seconds. Few races were better calculated to test the toughness of the race horse, from the continued rain during the race, the heaviness of the course, and the number of heats.

MISCELLANEOUS.

DISCOVERY OF THE JESUITS' BARK.

An Indian in a delirious fever having been left by his companions by the side of a river as incurable, in order to quench his thirst he drank plentifully of the water of the river, which having long imbibed the virtues of the bark that floated on the stream, it quickly dispersed the fever of the Indian. He returned perfectly cured to his friends, and having mentioned the manner in which he was cured, the afflicted flocked in crowds to the holy stream. The more intelligent of the tribe, however, discovered the reason of the medical virtue of the water. In 1640, the lady of the Viceroy of Peru was recovered from a dangerous fever by its use. In 1640, Cardinal de Luga and other Jesuits, spread the reputation of this medicine through Spain, Italy and Rome, and hence it obtained its name.

[Masonic Mirror.]

SILK.

An elderly farmer from Connecticut told us the other day, that he had about five hundred mulberry trees then growing on his own farm—that he fed one hundred thousand worms, which produced about fifty pounds of silk annually. The whole business, of feeding the worms, &c., is performed by his daughters. But very little labour is required, and he thinks that in the course of a few years, after his trees come to maturity,—he shall, by increasing the number of his worms in proportion to the quantity of feed supplied, produce yearly about three hundred pounds of the raw material. Thus giving his girls an opportunity of adding to the common stock of domestic comfort, and of providing a livelihood for themselves. We wish him success; and the heart of every friend to the increasing prosperity of our domestic manufactures, will throb a generous response. [Ib.]

EXPORTS OF SAVANNAH.

By the table of exports, it appears that for the year ending the 30th September last, there were shipped from the port of Savannah, one hundred and eighty-four thousand, two hundred thirty eight bales of Upland Cotton, and six thousand three hundred and forty bales of Sea Island—making one hundred and ninety thousand five hundred and seventy-eight bales. Also, eleven thousand four hundred and fifty-five tierces of Rice, and one hundred and seventy bales of Tobacco. The whole valued, at the present depressed prices, will amount to six millions eight hundred thousand dollars. To this may be added Lumber and other valuable articles exported, an estimate of which we have not been able to procure, that would greatly increase the amount of the

year's exports. Contrasting the exports of the years 1825 and 1826, we find the difference in favour of the latter year, fifty-two thousand eight hundred and eighty-three bales of Cotton, four thousand two hundred and twenty tierces of Rice, and one hundred and fifty-six hogsheads of Tobacco.

RECIPES.

PERMANENT INK FOR MARKING LINEN.

Take of lunar caustic (now called *argentum nitratum*), one drachm; weak solution, or tincture of galls, two drachms. The cloth must be first wetted with the following liquid, viz. salt of tartar, one ounce; water, one ounce and a half; and must be perfectly dry before any attempt is made to write upon it.

FOR SULPHURING WOOL, SILKS, STRAW BONNETS, &c.

Put into a chaffing dish some lighted charcoal; put this chaffing dish into a small close room, without a chimney, or into a closet or large box; then pound an ounce or two of brimstone, and strew it on the hot coals. Hang up the article you would have bleached, make your door fast, and let them hang three hours or all night, if you have time. This is what is called dry bleaching woollens: all fine coloured woollens should be sulphured in this way previously to their being dyed. Straw bonnets are likewise bleached in the same manner.

METHOD OF TAKING OUT THE SPOTS OF PAINT, OR OTHER SOLID SUBSTANCES, FROM CLOTH, SILKS, &c.

Supposing a small quantity of paint had dropped on a coat, a pen should be dipped in spirit of turpentine, and its contents should be dropped on the paint spot, in a quantity sufficient to discharge the oil and gluten that is mixed with the paint. Then let it rest several hours, that it may penetrate and suck up the oil: and when it has done this, take the cloth between your hands, and rub it; the paint spot will then crumble away like dried earth. The turpentine will by no means injure either the cloth or colour.

If, however, the spots be numerous, the best way is to apply the spirit of turpentine over the silk, &c., with a sponge, as soon as possible after the oil or paint, &c., has been spilt upon it, and before it is become dry: by these means it may in general be completely washed out.

EDITORIAL CORRESPONDENCE.

SILK, STRAWBERRIES, &c.

Extract to the Editor—Eastville, 6th Oct. 1826.

I can procure the large strawberries for you, and have given directions to my uncle's gardener to that effect. I have known them 4 to 5 inches circumference. I thank you for the squash seed, and shall take especial care of them.

A few of my neighbouring friends are determined to set about raising silk worms, and if you can furnish us with some of the eggs it will be a great favour. Very luxuriant white and black mulberry trees are to be found abundantly throughout the two counties; so that what appears to be the chief difficulty is, with us, already surmounted. We also need the necessary instructions for their management. I understand that where it is carried on extensively, worms are provided with shelves and other fixtures, for their accommodation. A plate representing this would be highly satisfactory, and would be a valuable article for the "Farmer." Surely essays on the subject are to be found among some of the French and Italian works, which could be dressed up for the purpose.

Respectfully, &c.

F. H. SMITH.

Extract to the Editor—dated Monticello, Georgia,
12th October, 1826.

We should be profited in this part of the country by a description of the most common and useful ice-house, such as would most certainly secure ice in this climate. Your ideas, or those of some experienced person upon that subject, would be thankfully received.

Since the decline in the price of cotton, the citizens here are entering largely into the spirit of breeding horses; so much so, that I am confident some good blooded stallions would sell well, and be profitable here; we should be pleased to get some such horses amongst us.

Crops of cotton and grain have been very much injured by the dry weather in Georgia, and it is believed that great economy must be used by our citizens to prevent distress from the scarcity of grain. They are seeding large wheat crops to make up the deficiency in the corn crops. The white flint wheat which you forwarded me last year, was somewhat injured by the fly, and it was sown too late to make a good crop in this climate. I have just seeded about forty acres with that kind of wheat, and if it does well I will give you the result.

Yours, very respectfully,

REUBEN C. SHORTER.

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 3, 1826.

The Trustees of the Maryland Agricultural Society are reminded that their next session is appointed for Thursday next, at Lexington, the residence of D. Williamson, jr.

The agricultural publick have been respectfully invited to consider the scheme of premiums published some weeks past in the American Farmer, to make through the Corresponding Secretary suggestions as to any modification of that scheme, which may be thought expedient—as it is yet to be acted upon by the Board. As not a single hint has been given, it is hoped that we shall have no fault-finding about the appropriation of the Society's funds. The Trustees can have nothing in view but the good of the cause.

By Captain Macy, a personal acquaintance and friend of General LAFAYETTE, who will sail from New York for France on the 5th of December, the Editor of the American Farmer intends sending wild turkies, American rabbits and partridges, South American Powees, (brought and presented by Mr. Keener, of Baltimore,) and other articles indigenous to our country. He wishes to add the varieties of *Indian corn*—that is, ears of that grain remarkable for colour, texture and size whether large or small. The same attempt was made last year, but so late that the collection was too small to be sent. As the season is now at hand for husking, if the papers will copy this paragraph, it is probable that specimens of a single ear or two, of twenty varieties of corn, might be selected within the time mentioned.

The Editor of the American Farmer requests to be supplied with some eggs of the silk worm for distribution amongst some friends, who propose to make experiments to demonstrate the practicability of the profit to be derived from the employment of labour and capital in that branch of industry.

N. B. He has an extensive collection of *Italian works on agriculture*, collected in Italy, and presented to him by the gallant Commodore JACOB JONES, on his return from his command of our squadron in the Mediterranean. It is probable these volumes contain valuable hints, perhaps ample instructions,

on the culture of the mulberry, the rearing of the silk worm, and the manufacture of silk. To any gentleman qualified to search them with that view, and feeling sufficient concern on the subject to make translations for the public benefit, we shall be happy to loan them for that object.

"AMERICAN ECLIPSE."—An opportunity is now offered to the breeders of fine horses to procure the stock of this very justly celebrated horse. He has arrived here from the north at the earnest solicitation of some few amateurs of the turf, and will remain, for two months only, at the stable of Martin Potter, three miles from town, on the Philadelphia road. Persons intending to avail themselves of the services of this horse must make immediate application as the number of mares is limited to twenty, and already upwards of half that number are engaged. Apply at the office of the American Farmer.

The sports of the turf were, perhaps, never encouraged with more animation in Virginia than at this time. For the spring races at Richmond, six horses are already entered. On the superiority of each of these, the owners confide so fully, as to have thrown, every one, into a common purse, the sum of \$500, making, besides the regular purse, the sum of \$3000—and it may be, that before the day arrives, as many more will be entered.

The Hon. S. VAN RENNELLAER, the chairman of the agricultural committee—the rare man who, with an immense fortune, is devoid alike of avarice and ostentation; has consented to serve again in Congress, if elected. But in such a case, there can be no if? he will be elected by acclamation!

AN EXTENSIVE NURSERY.—Messrs. Sinclair & Moore, who took at the last Maryland cattle show, the premium offered for the best cultivated orchard, have informed us that they have laid the foundation for an extensive nursery, as "a useful branch of their agricultural repository." They inform us, that "since the establishment of our seed store, we have been constantly applied to for fruit trees also. In consequence, last spring was a year we commenced a Nursery at our seed garden and vineyard; and last season we were offered the Harlem Nursery, owned by Joseph Townsend and others, which we purchased, and which at once put us in possession of a prime collection of fruit trees, ready grafted and budded, and stocks to graft on, from which, if we have a tolerable season, we may expect about 5000 trees ready to deliver this fall, and ten thousand more grafted, and growing this spring, among which are apple, peach, pear, apricot, plum, and cherry trees; so that we expect, from present appearances, soon to have a very extensive nursery of fruit trees, and worthy of the public patronage; and as we have during the last twenty years been taking pains to collect the best of fruit from New York, New Jersey, Pennsylvania, Richard Cromwell, &c., many of which have long since been in full bearing, we have the opportunity of grafting and budding from bearing trees, thereby avoiding mistakes—and having a professed hand at the business, we have no doubt but we shall give general satisfaction."

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	6	10	9	12
BEES-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16½	17½	20	22
Havana,	—	14	17		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . .	—	10	12		
COTTON YARN, No. 10,	—	28	30		
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	11	12		14
CHEESE,	—	8½	10	12	15
FEATHERS, Live, . .	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . .	—	5 50	6 00		
FLAXSEED,	bush	75	80		
FLOUR, Superfine, city,	bbl.	5 00	5 12	5 25	6 25
Fine,	—	4 75			
Susquehanna, superfi.	—				none
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	50	55		
white	—	50	55		
Wheat, Family Flour,	—	1	1 10		
do. Lawler, & Red, new	—	95	1		
do. Red, Susque. . .	—	1 03			
Rye,	—	75			
Barley,	—	1 12½	1 00		
Clover Seed, Red . .	bush	4 50		5 00	
Ruta Baga Seed, . .	lb.	87	1.00		
Orchard Grass Seed, .	bush	3 00		3 50	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	4 00		4 50	
Oats,	—	48	50		
Beans, White, . . .	—	1 25	1 50	1 87	
HEMP, Russia, clean,	ton	200	210		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	25			
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	7			
Bar	—	7½	8		
LEATHER, Seal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	46	50	62½	75
Havana, 1st qual. . .	—	30	32	37½	
NAILS, 6a20d. . . .	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter .	—		75	88	
PORK, Baltimore Mess,	bbl.	11 00			
do. Prime,	—	8 00	8 50		
PLASTER, cargo price,	ton.	3 50	3 62½		
ground,	bbl.	1 50			
RICE, fresh,	lb.	3½		5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	8	10	12
WHISKEY, 1st proof, .	gal.	33½	35	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	29		50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—		10 75		
Louisiana,	—	9 25	10 00	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	13
Pepper,	—	16		25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	48		75	
SHOT, Balt. all sizes, .	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Claret,	doz.	4	8	5 00	8 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full b'd	lb.	30	35		
do. crossed,	—	20	22		wash'd on
Common, Country, . .	—	18	22		sheep's
Skinnors' or Pulled, .	—	20	25		back & flees

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AGRICULTURE.

HOME MARKETS—AGRICULTURAL PRODUCTIONS AND RAW MATERIALS.

(From the Memoirs of the Board of Agriculture of the State of New York.)

A Memoir on the expediency and practicability of improving or creating Home Markets for the sale of Agricultural Productions and Raw Materials, by the introduction or growth of Artizans and Manufacturers—by GEORGE TIBBITS, of Rensselaer county.

Read before the Board of Agriculture of the State of New York, March 8, 1825.

(Continued from p. 260.)

The question, as it relates to this country, is, shall we profit from the example of England? That we may do it under advantages and prospects altogether more favourable, and to greater effect than England ever did, is most certain. To arrive at the same point of elevation, and that comparatively soon, we have only to adopt the measures which England did, and to avoid her unnecessary wars.

Great Britain, had she adopted her present course of measures at an earlier day, in relation to her manufactures and trade, and avoided unnecessary wars, might probably have attained to her present elevated condition, in any one of the centuries since the thirteenth.

It is maintained that our population is not sufficiently numerous, to commence manufacturing; that we have not the hands to spare from other more profitable and healthful employments; that if we had, this surplus population would take to manufactures as a matter of course.

It may be remarked that this objection is usually made, wherever manufactures are not extensively carried on. It was so in some of the old countries. It is so at this time in Poland; in this and many other countries, and will probably be so in every country, until manufactures are commenced in that country.

The labourers of this country are mostly confined to the land, from which many might be beneficially withdrawn; for they are earning but very little there. But they have not the necessary knowledge of any other calling; and those who have grown old in labours upon the land, cannot easily be learnt a new trade: nor is it believed to be necessary or desirable that they should be. Manufactures, if they can find protection, will be carried on, and supplied with hands, who will come to us already learned, from the countries from which we have obtained our manufactured articles, or be made from the younger and growing population of this country. By giving to the younger and growing population, business at home, we shall prevent them from strolling into Canada or Michigan, in search of new places of residence; and the strength and wealth of the old settled states will be augmented by retaining them, and giving them opportunities, as artizans, of obtaining comfortable livings.

In our rage for growing bread-stuffs and provisions for foreign markets, about all the lands in this state, of a good quality, with much of the poorer grades, have been settled. The canals which have, to an incalculable extent, advanced the general wealth of the state, have, with the benefits conferred, furnished a cheap and expeditious means of getting out of it, and we may calculate that this means of getting out of the state into others, or into Canada, will be improved to a very great extent, by many, who find themselves without employments affording some prospect of profit, and the canals thereby, and to that extent, become a mean of lessening, instead of augmenting our numbers, as was expected.

But it is believed that hands could easily be ob-

tained without difficulty or prejudice to any other branch of business. They would, like all other apprentices, the most of them be unlearned, it is admitted. We did not feel the loss of the hands, nor of the capital, which was drawn into the cotton manufactory. Hands, employed as manufacturers, are not of the description of labourers deemed most profitable at out-door work. Seven tenths of the hands employed in our cotton mills, would have earned little or nothing, but at some such employment. It may be furthermore remarked, that at the commencement of manufactures in most countries, there is a seeming want of hands; but if manufactures had not been established, the hands employed in them, might not have been in existence.

By establishing manufactures, you enable the hands required to work them, to accumulate to an extent which they never could have done but for their establishment. The population of England must have remained vastly less, and that of Flanders, much greater, had England been content to have continued her former practice of sending her wool to Flanders, there to be worked into cloths, and the cloth sent back to England, in exchange for more wool. The population of England has, no doubt, been vastly enlarged, by changing this policy. Retaining her wool, and refusing to receive cloths from abroad, the artizans of Flanders had less to do; but it made room, and gave employment for artizans in England; to which the artizans of Flanders, and other parts of the continent, found their way; or they were soon grown in England to the required number. By adopting the same policy here, we shall find that a like cause will produce the same effect in this country. This change in the policy of England may have occasioned some dissatisfaction at first. The persons by whose agency the former intercourse had been conducted, may have apprehended the loss of their business, and the gentry may have been dissatisfied at paying, for a short time, enhanced prices for less fashionable goods; but it raised England to an elevation in wealth, strength, political and civil consideration, to which she never could have attained, without that change in her policy. She soon found that her number of people; her internal and external trade; the style of cultivating and rent of her land; and, above all, the revenue derived from her importations from abroad, were greatly increased and enlarged, and is still found to go on increasing. She had to grope her way to wealth and eminence, without the aid of the numerous precedents and examples which, by the history of her rise, and that of other countries, are now afforded to us. She made some errors in her progress, which, by these lights, we may avoid. It is worthy of remark, however, that her statesmen never for a moment thought of following the plausible theories of the Adam Smiths and M. Says, of the day. They looked to the practical operations and results of measures. When they found them prejudicial, they changed them; and left the speculations of these gentlemen to be studied and followed by us, and such other nations as thought proper to follow them, to the benefit of England, and to their own individual ruin.

Had the double duties imposed during the late war, remained upon such articles as we had commenced the manufacture, the slaughter which took place among the sheep in 1818-19, and '20, would never have happened. Our hills at this time would have been covered with sheep; extensive manufactories of woollen and cotton goods would have been in operation, with probably many others; the prices, like those of coarse cotton cloths, would at this time have been as low, or lower, than the imported; there would then have been a few articles, upon which the farmer could have relied for money to pay his taxes and other demands.

If we had been permitted to supply the southern states with negro cloths, in exchange for their cot-

ton, it would have afforded some relief to the farmer, who would have furnished the wool and provisions required for their manufacture, and placed them nearer on a level with their brethren the cotton-growers. But, withdrawing the shield of government in those double duties, and thereby placing our new beginners in competition with the larger capitals and better learned artizans of England, they were broken down. For want of such protection, as shall inspire full confidence in the manufacture of woollen cloths, another defeat of the wool-growing business may be apprehended. England having the artizans for converting foreign wool into articles of the most approved fashion, has thereby the means of throwing foreign wool into our markets, to the exclusion of our own, in a shape so acceptable to the tastes of our people, as to insure its being taken in preference to that raised here: and the same may be said of many other articles. The farmer is, moreover, for want of that protection and encouragement to the required artizans, deprived of many, and the most profitable applications of his land and labour, and compelled to drudge on in the old track, in poverty.

The mechanic arts are not only the hand-maids of agriculture, and its principal support, but they are powerful auxiliaries to each other, and to the pursuits of science generally.

Encouragement to the introduction from abroad, or growth within the country, of a population for the purpose of converting raw materials into manufactured articles, and making home markets for the consumption of agricultural productions; and this by duties or prohibitions on foreign goods, is further objected to, on the ground of policy; and the writers before mentioned, Smith and M. Say, are cited as authorities. It is maintained by foreign commercial agents in this country—by our importing merchants—by the shipping interest generally, and cotton-growers of the south, that the prevailing opinion in England, and the acts of the English government are in accordance with the theories of these gentlemen—that the English are doing away their protection to manufactures and trade, as far, and as fast as practicable—that they have finally become convinced that their protections, by way of prohibitions, bounties and duties, have been of more injury than benefit to them—that their manufactures and trade have arrived to their unexampled state of prosperity, not by the aid, but in despite of these regulations. The books of these gentlemen are in the hands of almost every body, still it may be well, very briefly to state their leading theories, and to inquire how far the allegations, that England has become sick of her protections and restraints, is founded in fact. To do this, however, within any thing like reasonable bounds, but little more can be said than to state facts and refer to authorities.

The leading principles of these gentlemen, are claimed to be based upon the natural progress of man from the savage to the most civilized state. That men at first subsist by hunting, fishing, and on natural productions, without labour: from that state they pass to that of shepherds or herdsmen; from that to the division and cultivation of land; after which, manufactures are commenced as a distinct profession. When the cultivation of the land and manufactures are filled with capital and labour to overflowing, the next branch of business to be taken up is that of external commerce, with navigation. The next in succession, is carrying the productions of one foreign country to that of another. After all these several branches of business are overdone, then emigration and the establishment of foreign colonies commences: internal commerce being incidental to every stage. That the patronage and protection of government, should never be extended to any one branch of business over that of another, nor to the labour, ingenuity, or enterprise of the citizen or subject, over that of the foreigner; but that all, as well

*citizens as foreigners, sh. uld possess equal rights, and purchase where they can cheapest, and sell where they can dearest, without duties or impediments **

The English nation, with some temporary exceptions, practised for a long time in the early part of their history, nearly upon these principles; giving sometimes to the stranger, and sometimes to the subject, the advantage; and, like all other nations who still continue that practice, were poor; depending upon foreigners for manufactured articles, and for markets for their raw materials. Their numbers were comparatively few; their lands were badly cultivated, and unproductive; their foreign commerce and revenue from duties on imported articles, insignificant. But the English, disregarding theories like those just mentioned, changed this policy.—From time to time, prohibited positively or virtually, by high duties, one list of manufactured articles after another, until about the whole of them were virtually excluded. They put in operation their celebrated navigation act; protected their manufactures, shipping interest and trade, from the interference of foreigners; and thereby drew into, or grew up in their country, their existing overpowering stock of artisans and seamen; made good and certain home markets for all their raw materials and agricultural productions and raised their revenue, shipping, mercantile and landed interests, far above that of any other country.

It is somewhat remarkable that our first Congress disregarded the order of time, in which the several professions should naturally, according to the foregoing theories, rise and succeed each other. They passed over manufactures, with but a slight notice in the preamble of a bill, and determined that the country, whether it had any thing else or not, should have a competent stock of ships and seamen; and to that end, and looking to foreign countries for markets for agricultural productions, and for a supply of manufactured articles, gave to the shipping interest a powerful protection, which, with favourable incidental circumstances, raised it to its present state of prosperity.

As the fact of protection to the shipping interest of this country is notorious, and only incidentally mentioned here, it is not deemed necessary to cite all the particular incidents in which, to maintain its just rights, the landed interest has suffered. The dispute, however, with England, whether the ships of this country should, on equal terms with their own, transport plaster from, and rye and Indian corn to Nova Scotia; and rum and molasses from, and corn, flour, and lumber to the West Indies, was mainly the cause of the extreme depression of flour, in the years 1820 and '21. England was willing to take our Indian meal and flour in their own ships, to feed their negroes and fishermen, but not if taken in ours. Congress, to maintain the just rights of our shipping, refused to let these articles be taken out of the country, if to be transported in English ships exclusively, to their provinces; but would permit them to be taken, to be transported in the ships of the two nations, without preference to either. The articles could not be sold unless taken in one or the other, and whether taken in one or the other, it was immaterial to the landed interest; but pending the dispute, these articles remained on hand, and fell below any former price since the revolution. England, in the course of the dispute, granted permission to our vessels to take them to England, there to be warehoused, until their vessels

found it convenient to take them to the West Indies; but would not suffer that part of the flour which soured in their warehouses, to be used in sizing for the muslins and calicoes which they were making for our markets, and which, with their other manufactures, we have continued to take from them, until, having nothing else which they would take in payment, they have withdrawn from us a large proportion of our publick stocks as remittances for these articles. But to return.

Anderson's History of Commerce, in 6 volumes; McPherson's Annals of Commerce; Holt's Administration of the affairs of Great Britain and Ireland, and Howe's Present State of England, are referred to, for the particular incidents of protection granted by the British government to the manufactures and trade of that country, from the 11th century to the present time, and for the improvements and benefits derived thereby, to the landed interests and revenue of that country, and in support of the policy which it is advisable for this country to adopt.

Pope's British Customs, will shew what were the regulations of trade, prohibitions and duties at, and for some time before the year 1819. In that year, very extensive modifications of duties and prohibitions were made. These, with subsequent alterations, and amounting altogether, nearly to an entire new code, have been procured by our Secretary of State, and reported to Congress at its present session, and officially published. They occupy 287 octavo pages, and shew what the English regulations of trade are, to a late period. It becomes impracticable to state the particular provisions, but they show most conclusively, that there is no disposition existing in the British government towards relaxation; but, on the contrary, a most cautious and rigid attention to maintain her system is evinced. The number of articles permitted to be imported, has been increased, but every manufactured article, of which there are a few, is subjected to such excessive duties, as to render the admission nearly nominal. (See Note B.) No person, after examining this document, can pretend that there exists the smallest appearance of relaxation in the British government, and will attribute the fallacious representation of a disposition to do so, to the cupidity of British commercial agents in this country, or to self interested motives in other persons. That there are, however, in England and elsewhere, many persons of the opinion that the time has arrived when it would be good policy in England, to do away those restrictions and protections, there is no doubt; and to open a free unrestrained trade with every other nation who would in like manner take away all restraints, protections and preferences, and open an unrestrained free trade with her. Protections to manufactures and trade could, to all appearance, be better dispensed with by England, than by any other nation. What has England to fear in her own markets, from a competition with foreign manufactures? Such is the immense advantage which she derives from having domesticated and combined within the nation, all the arts, with ablest artisans in abundance, and with the best tools, labour-saving machines, and fixtures adapted to every purpose, in every known art, and manufacture, that it would seem to be evident, that she has nothing to fear in her own markets, from the artisans and manufacturers of any other people.

Nations, who like us, have not the necessary knowledge of the arts for manufacturing, nor the artisans; to obtain them, must do as England did; that is, give them substantial and efficient protection; but when once obtained, the nation who possesses them, may remain fearless of competition. But it may possibly be the case, that England, before long, will come out with a proposition, to admit our bread-stuffs and provisions, our lumber, and every thing which we may think proper to send her, on condition that we continue to take her manufactured

articles in return. If so, and the proposition should be accepted by our government, it ought to be looked upon as a great calamity. We may then abandon all hopes of an efficient home market for agricultural productions. In fine, we may make up our minds to remain forever poor; with our lands badly tilled, and revenue from duties small.

The West India and Nova Scotia dispute, terminated in an accommodation of this kind, in relation to the shipping of the respective countries. But it should be recollected, that navigation forms but a single item: our people had become thoroughly acquainted with the art, and largely extended in it, before the accommodation took place. It is not so with manufactures: most of them are not understood; and who ever calculates upon their rise for a long time, without powerful protection, will be disappointed. But the farming interest, who constitute a great majority in this country, have only to say the word, and their representatives in Congress will adopt measures, which shall soon give them manufactories and safe home markets for all their productions.

Protection to manufactures, is further objected to on the ground that Congress is not authorized by the constitution to give that protection, by increased duties or prohibitions, nor to cherish and elevate one branch, where that elevation or protection may prejudice another branch of business; and more particularly, where it may prejudice the shipping and importing branches, already established, and in successful prosecution.

To these objections, it may be replied, that, whether the powers in question have, or have not been delegated to Congress, that body have uniformly exercised them for every purpose, deemed necessary in promoting the public welfare. The power has unquestionably been given to Congress, "to lay and collect taxes, and to establish imposts; to regulate the trade with foreign powers, among the several states, and with the Indian tribes." Another important function conferred upon Congress, is, "to provide for the public defence, and for the general welfare."

NOTE B.—By the British corn law of 1815, wheat was not allowed to be imported, when the average price was below 80s. sterling per quarter of 8 Winchester bushels, or \$2.22 cents per bushel. The law of 1815 has been repealed, and wheat may now be imported when the average price shall be 70s. per quarter, subject to the payment of a duty of 17s. per quarter, for the first 3 months; after that, to 12s.

Wheat is admitted from Canada when the average price is 59s. subject to the same duties as foreign corn.

Before 1819, according to Pope's British Customs, woollen cloths were permitted to be imported on the payment of the permanent duties of £1 14 shillings, equal to \$7.55 cents per yard, for cloths of all descriptions:—to which had been added, during the late war, one-third, 84.

By the tariff of 1819, they are allowed to be imported, on payment of 50 per cent. duty, on the market value.

Articles made of leather before 1819, were admitted on the payment of 142½ per cent. duty:—after 1819, they were admitted on payment of 75 per cent. duties.

By the tariff of 1819, or present tariff, linens are admitted—

Plain linen, on payment of duties £76 13 14 on every £100 of market value.

If checked, dyed or striped, on every £100 of the market value, £172 10.

Sail cloth or duck, £5 07 4, equal to \$23.85 cents, to £9.07, equal to \$40.30 cents for 120 ells.

Of the few manufactured articles admitted, the duties are rarely less than 50 per cent., and from that to 150.

* The maxims of those writers allow of some very few exceptions to this rule; but they are so limited and qualified, as not to alter the general principle. Their theories, in other respects, are not complained of; but in this, they are in direct opposition to the policy which has given to the manufacturing and commercial nations of Europe, their present ascendancy, and which are ensable to the prosperity of this country.

Cotton goods, of which there are some not prohibited, pay duties of from 50 to 75 per cent.

Of earthenware, there are some kinds not prohibited, pay duties of 75 per cent.

Glass plates, 80 per cent.

Hides, tanned or tawed, 75 per cent.

Paintings on glass; 80 per cent. exclusive of excise, 16 00.

But these duties must be merely nominal, because no person would think of sending manufactured articles to England, even if there were no duties charged on them.

On the few articles which are, or can be sent to England, from the middle or northern states, their existing duties are enormous:

Potash, \$2.48 cents per cwt. or 40 per cent.

Barrel staves, per 1000, \$16.33 68 "

Hogshead staves, " 32.06 88 "

Pipe staves, " 44.44 90 "

Tobacco, 4s. sterling per lb., equal to 88 cents per lb. or 1400 per cent.

Bacon or hams, £2 16 sterling, or \$12.43 per cwt.

Butter, per cwt. £1 05, or \$5.55 per cwt.

The sterling is stated in dollars and cents, as this denomination, being our own currency, is easier apprehended.

NOTE C.—See the acts of Congress of 18th of April, 1818, and 15th of May, 1820. The British did not accede to the claims of Congress in behalf of our shipping, until June, 1822. In the mean time, their West India provinces, and the farmers of this country suffered severely. Wheat fell to 70 cents per bushel in 1821. The loss in this and many other articles, to the landed interest, was immense. Congress is, notwithstanding, entitled to the highest commendation for protecting and defending the rights of the shipping interest, let the loss or the cost of that protection affect whoever it might; and it is to be lamented that Congress delay extending a like protection to the farming interest, through the medium of manufactures. Losses of this kind are only temporary. To have submitted, would have been as degrading as was the proposition to suspend the non-intercourse law in 1812, so far as to admit of the importation from England of blankets and trinkets, for the purpose of pacifying or propitiating the Indians. It is, moreover, remarkable, that the abandonment of this monopoly, wrung from the British government by the severest sufferings of their Provinces, and conceded with so ill a grace, has been extolled and trumpeted through this country by her agents and satellites, as evidence of a liberal disposition in the British government to abandon their prohibitory system altogether.

(To be continued.)

YOLK—AGAIN.

MR. SKINNER,

The reader will understand we contend—1. That every opinion as to the effect of yolk upon wool, must be from the nature of the subject speculative, that the *modus operandi* of nature in producing and disposing of this secretion, has not been explained; it is therefore not known what effect it has upon the quality of wool, or whether it may not have been designed for some different purpose. 2. That the finest fleeces have not uniformly the most yolk, and therefore, the quantity of yolk is not to be relied upon as a guide in the selection of a merino flock; some few breeders may still retain the old opinions on this subject, and others, wishing to embark in merino breeding, and relying upon that erroneous rule, may be disappointed in the selection of their flocks. These considerations alone, induced me to write a short article on the subject, not dreaming that it would, and, I hope it has not been considered disrespectful to any one. The first position above stated, has not been controverted; the next has been

opposed, not by the explanation of any difficulties suggested, but by authority: truth is not always best discovered by a reliance upon authority, on the contrary, that species of argument is always to be received with caution; we should examine it closely, and scrutinize well the author's means of information, the accuracy of his facts, and the consistency of his positions and arguments. Mr. Luccock, who has written more on the properties of yolk than any other, being regarded as your correspondent's best authority, has been subjected to those tests—and it was attempted to be shewn that he was without experience on this subject; that he had not even seen a merino flock. I am thought to have misunderstood him, and made an erroneous inference; let Mr. L. speak for me. In approaching his discussion of the properties of yolk, he says: "In order to have a complete view of this subject, it will be necessary to apply ourselves to the consideration of those more particular causes, which operate directly upon the fleece; in attempting this, we feel more than usual diffidence, for although it be a subject *completely experimental*, and in connection with which all unsupported theories are idle and delusive, truth and candor compel us to acknowledge that we are totally unacquainted even with the rudiments of farming, *confined almost entirely within the precincts of commerce, rural concurrence reach us only by report.*" What more can be desired to prove that Mr. L. had not the experience necessary to decide the point he was about to discuss. If any thing more be necessary, hear him further: "Should these pages," adds he, "fall into the hands of a professed grazier, we commit them to his candour, and solicit information." This point being settled, the next inquiry is, had Mr. L. ever seen merino sheep? "He," says he, "had not seen any of those animals or their produce, which are said to afford a staple equally fine from every part of their body." My inference, that L. alluded to merinoes in this remark, is controverted; let us examine the evidence. Luccock does not speak of any other race of sheep possessing the above remarkable properties, but he does speak of merinoes as having this quality. Page 108, he observes: "There are fleeces, *we are told*, so uniformly alike through the whole extent, that persons accustomed to observe wool, and even manufacturers, have not been able to distinguish any difference in the fineness of the pile; when staples, separated from different parts of the sheep, have been presented to them, if any discrimination was made, they have sometimes pronounced that to be best which grew most remote from the vitals; such is the description which Dr. Parry gives us of his new breed of sheep, obtained by combining the blood of the Spanish, with that of the Ryeland race." It is obvious, that Mr. L. had not seen Dr. Parry's sheep, then the principal merino flock in England, and the inference is fair, that he had not seen the pure merinoes which had a reputation with every body but the Doctor, equal, at least, to his mixed race. Mr. L. further adds, that he had "never yet met with a single instance in which a lock, shorn from the buttocks, was not *GREATLY COARSER* than another taken from the shoulder." This is not the fact with good merinoes; although there is a difference, yet a candid writer would not describe it by calling it a *GREAT DIFFERENCE*. Again, I infer more strongly, that he was unacquainted with the merino race, from his having not given them a place in his list of the different species of sheep; they are not even named in his elaborate work, except incidentally, and then only from report, or conjecture. The reader must be satisfied that I have not perverted the meaning of a paragraph to sustain a position, as your correspondent supposes. The next authority, in point of weight, is Dr. Parry, and whatever speculative opinions he may have entertained about the properties of yolk, he distinctly says, in one of his papers, that he had "never selected a breeding

ram, or ewe, on account of any other quality than the fineness of the fleece." To this may be attributed the rapid improvement of his flock. He sometimes indulged his imagination, as will be admitted, when he fabricated the "idle tale" above, quoted from Luccock, "ascribing to his favourite race excellence which the wool-stapler had not discovered in the pursuit of truth;" and also, when he said that "the fourth cross equals in fineness that of Spain, but that *by one dip more of the Spaniard*, the entire produce was considerably coarser than that of the former generation." This story so much resembles that of the man who squealed more like a pig, than the pig itself did, that notwithstanding the grave rebukes of my friend, I cannot treat it seriously; such extravagance and inaccuracy in matters of fact, must weaken the Doctor's authority on *speculative* matters. Another authority is Sir George McKenzie, who has compiled some useful hints on sheep; but when he tells us, that "ordinary sheep naturally shed their wool annually," I want no other evidence of his total want of close observation and experience on the simplest properties of the animal he undertook to write about. I will not protract this letter by a further examination of the authorities. The correspondence given with Mr. Caldwell, has furnished ground for my argument. The inquiry put to Mr. C. is, whether he had "not found the finest fleeces *generally* contain the most yolk." Now, if it be the fact, that the most yolk is only *generally* found in the finest fleeces, then it is surely more prudent for one about to select a flock, to examine the wool, than rely on the yolk as a guide, which is nearly all I have insisted upon. To this question, Mr. Caldwell replies "*generally* in the affirmative," but adds, that he has "known exceptions to this general rule in sheep, that appeared to have a *peculiar secretion and concretion of yolk.*" It should be observed, that when there are only slight shades of difference in the quantity of yolk, and also in the quality of the wool, it is extremely difficult to determine their respective and relative proportions and qualities; hence, nothing would be more easy than for a pretty close observer, with the aid of a little prejudice, to deceive himself; none but sheep-shearers, who are good judges of wool, could pretend to distinguish in such cases, and even they might not always agree. There are, however, some few sheep in most flocks which have a very copious secretion of yolk, easily discerned by their very dark exterior, resembling a coat of tar and dirt. These are no doubt the sheep which Mr. C. considers as having "a *peculiar secretion*," &c., and as exceptions to his general rule. It is there specifically admitted, by that intelligent breeder, that those sheep which have the most copious secretion of yolk, have not the finest wool, or at least, that they have not *generally* the finest wool; if he meant the former, he admits *more*, and if only the latter, *quite as much* as I have contended for. Mr. C's evidence goes, therefore, to prove that those merino sheep which do not secrete yolk very copiously, have *generally* the finest fleeces where the most yolk is to be found, and that those which have "a *peculiar secretion*," &c., (that is obviously the most yolk,) are exceptions to this rule, or in other words, have not *generally* the finest fleeces, nature makes a new law for such! The reader must perceive, that this discussion is now narrowed down to the smallest imaginable point; every thing I have contended for is given up, except a mere *speculative* fact, standing in opposition to an *experimental* fact, conceded by my opponent in this controversy. But "Columella is accused of a *felo de se.*" To sustain this accusation, he is made to say, *by inference*, that yolk is not a characteristic of the Merino race. This inference is erroneous. I have no where said any thing from which it could be drawn; on the contrary, I have called them "the only race in which an exuberance of yolk is found." I have, moreover, specially guard-

ed against such a misconception, by stating, distinctly, that I spoke of Merinos as individuals, not as a species. To infer that I had said what I did not say, and which, if I had said, I would rather have deserved oblivious neglect than replication; and then to prove by a quotation from my paper that the imputed statement was erroneous—is to raise up a man of straw, and then cut off his head.

Another charge of inconsistency as to the characteristic marks of fine woolled sheep, is somewhat of the same character. It was remarked, that the blooded horse is distinguished by certain marks which good judges cannot mistake; hence I am inconsistent in considering "fineness and uniformity as the most essential ingredient in the value of a fleece," and in rejecting other marks, such as yolk, dewlaps, and woolly heads. There is a want of precision, either in my expressions or in Mr. C's conception of them. I spoke of the blooded horse as a species, and as observed before of merinoes, as individuals; the former in comparison with other species, the latter in comparison with others of the same species. A good judge will distinguish a blooded horse from other species, or varieties of the horse; but he cannot distinguish, by any specific marks of the race, that horse which can run the swiftest or hold out the longest: nothing but his trial on the course can prove these qualities. So may almost any person distinguish a merino from other species of sheep; but he cannot distinguish by the yolk, dewlaps or woolly heads, that individual merino which will yield the finest wool; nothing but the inspection of the fleece can so certainly enable him to do this.

In conclusion, I must repeat the queries suggested in my last, which appear to have been wholly overlooked.

If yolk is "necessary to the growth of fine wool," and "the finest fleeces have usually the greatest quantity of it," how does it happen that South Downs, and several other breeds, have as fine, or finer wool, than half-blood merinoes, while the latter secrete a much greater quantity of yolk?

How does it happen, that high fed sheep have more yolk and coarser wool, than low fed sheep?

How does it happen, that rams have more yolk and coarser wool, than ewes?—Does not reason teach us to doubt a theory which has such difficulties to reconcile?

Some allusion was made to my anonymous character; I am content to submit to this disadvantage, having no wish to appear before the public as a writer, nor at all again on this subject—and remain,
Yours, &c.
COLUMELLA.

MIDDLEBURGH SHOW AND FAIR.

[We are much pleased to find, by the "*Genius of Liberty*," that an Agricultural exhibition was held, with satisfaction to those who have been most active in its promotion, at Middleburgh, on the 17th day of last month, under the auspices of the Agricultural Society for the counties of Loudon, Fauquier, Prince William, and Fairfax.

Premiums were awarded at the above mentioned exhibition for the best CROPS, HORSES, CATTLE, SHEEP, SWINE, FAMILY DOMESTIC MANUFACTURES, and IMPLEMENTS. Of these awards we are not expected to give a complete list, but we deem it fit to give such portion of them as were taken by the fairer sex. The premium for Indian corn was awarded to John Wright, for the produce of an acre which is said to have yielded nineteen barrels and three pecks. The same gentleman took the premium for the best crop of hay, being, as reported, 5,492 lbs. The premium for the best Stallion, was awarded to Major Joseph Lewis; but no names have been given to any of the breeding animals—areas, in our humble judgment, no premium would be awarded to any animal which does not

bear a name, by which the pedigree of their progeny may be traced hereafter.

We are glad to see that our late esteemed fellow citizen, Thomas Maund, who has had the good fortune to exchange the editorial desk for the more wholesome and grateful toils of the field, bore off the premium for the best Merino ram.]

On Domestic Family Manufactures.

For the best hearth rug, to Mrs. C. Powel,	\$2 00
For the best carpet, do.	3 00
For the best woollen and cotton counterpane, to Mrs. John Roszel,	1 00
For the best worked cotton counterpane, to Miss M. Love,	1 00
For the best worked cotton counterpane, to Mrs. E. Smith,	1 00
For the best worked cotton counterpane, to Mrs. Mary D. Wright,	1 00
For the best piece of flannel, to Mrs. Wm. B. Steer,	2 00
For the best pair worsted stockings, to Miss Mary Ferguson,	1 00
For the best pair of yarn stockings, to Mrs. John Wright,	1 00
For the best table linen, to Mrs. Sarah Powel,	1 00
For the best linen, to Miss E. Carter,	1 00
For the best pair yarn socks, to Mrs. Wm. B. Steer,	1 00
For the best pair cotton stockings, to Miss S. Skinner,	1 00
For the best pair thread stockings, to Miss M. D. Wright,	1 00
For the best pair cotton socks, to Mrs. Ann French,	1 00
For the best imitation Merino shawl, to Miss E. Hawling,	1 00
For the best pair yarn gloves, to Miss M. D. Wright,	1 00
For the best pair thread stockings, to Mrs. Eleanor Tripolett,	1 00
For the best piece of waist-coating, to Miss Mary S. Love,	1 00
For the best piece of linsey, to Mrs. C. Powel,	2 00
For the best sample of cheese, to Mrs. Bevers,	1 00
For the best sample of butter, to Mrs. Baldwin	1 00
For the best piece cassinett, to Miss Eliza Chilton,	2 00
For the best sample of currant wine, to Mrs. Thomas Turner,	1 00

[On the subject of that president of all implements, the PLOUGH, the Committee thus conclude their report:]

On Ploughs, Ploughing, &c.

For the best bar-share plough, to Wm. Stuart, 5 00
Mr. Stephen McCormick presented a plough, possessing improvements on the original model—whereupon, it was resolved by the society, "That \$2 be awarded him for his plough, in regulating the beam of the same; adapting it to the use of either two or three horses; as also for the additional improvement of the concave groove for fastening the handles."

Wm. Swart also exhibited a plough, which the committee deemed worthy of attention, but it was presented too late for competition.

To Joshua Fletcher, as the best ploughman, 1 00
Per order,

TASKER C. QUINLAN, Sec'y.

[Cuthbert Powel, Esq., President of the Agricultural Society of these united counties, delivered on the occasion an address, for which he received their unanimous thanks, and a request to furnish a copy for publication. In our next we shall publish copious extracts from it, for the gratification of our readers.]

NEWARK MEADOWS.

(From the New-York Gazette and Athenaeum.)

On the important subject of embanking and draining the Newark Meadows, and speedily rendering them fit for cultivation, we are inclined to believe there is less difference of opinion than is generally imagined. Most men of intelligence view the subject in nearly the same point of light, not doubting of the practicability of the enterprise, nor of the profit that would accrue to the adventurers. It is among those individuals only, who have taken up notions hastily, and drawn their conclusions from a variety of chimerical data, we perceive a great diversity of opinion, some of whom acknowledge that it is in the power of human skill to effectually reclaim these meadows, but that the enormous expense and waste of money in the operation, would so overbalance every benefit that could be expected from the measure, as to stamp the enterprise with folly. Others there are, who have never bestowed any serious reflection on the subject, and, as naturally would be the case, have suffered their opinions to be biassed by transient circumstances. The efforts already made, and which, from the want of adequate capital to prosecute the enterprise to a fair conclusion, is sufficient, for these people [who mistaking effect for cause,] pronounce upon the whole contemplated undertaking, and deny, [with the confidence of experienced judges,] that it is within the range of possibility. To do away the injurious effect that these opinions might have on the mind of the community, and to draw the attention of the public to a subject so materially affecting the future local resources of this great metropolis, the agent of the Hoboken Banking and Grazing Company, propounded a number of queries to Anthony Dey, Esq., and Mr. Seeley, two enterprising gentlemen, who have undertaken to reclaim a portion of these meadows. As their efforts have been crowned with complete success, and their lands now in a rapid progress of amelioration and profit, we shall be contented with a few of the answers to the questions put. It is to be observed, however, that the reclaimed lands of Mr. Dey, lying lower than the lands of the company, presented greater difficulties in the operation of draining.

Question. Are not the meadows between Newark and New-York pretty uniformly of the same general character?

Answer. There is the same variety of soil throughout all the meadows; some kinds are estimated by some persons better than others; but I believe, when all are alike reclaimed and cultivated, they will be found equally good. I have found, as to the produce, little or no difference in mine, since their reclamation, whether it is turfy or clay soil.

Q. How long since you commenced reclaiming those meadows which belong to you?

A. I purchased my meadows after they had been banked or dyked some few years; and do not know how long, and continued to manage them in the same mistaken manner they had been previously managed, until about four years ago. I do not consider they have been dealt with properly until within four years past; when I abandoned the advice of others, and began to reclaim them upon my judgment.

Q. What number of acres have you reclaimed? and what is the shortest period within which you have effected a reclamation of any part, and the process pursued?

A. I have not the exact number of acres in my mind; but there are somewhere from one hundred and forty, to one hundred and fifty acres in the embankment belonging to me, and to which my labour and attention has been directed. Owing to the previous mismanagement, I was compelled to bestow much more expense and labour than I think will be necessary on those meadows dyked by the Mass.

Swartwouts. As it regards these meadows, of which I own about two hundred acres, the following is the plan, if I continue to hold them, I have contemplated to pursue: *First*, To have the bank and sluice gates perfectly tight, so as completely to exclude the salt or river water. *Secondly*, By drains or ditches, to make the land as dry as practicable, so that man and beast, with all the implements of husbandry, may pass over it without miring. *Thirdly*, As soon as it can be ploughed, to do so, and make fallow ground, and have the soil exposed to a summer's sun, and a winter's frost, and by frequent ploughing and harrowing, destroy the present vegetation; or, in other words, I would plough it in August and the fall months—the following spring and summer, I would cross-plough, and harrow it until the soil is completely reduced and pulverized; and in the months of July and August, and the early part of September, would apply about one hundred bushels of stone lime to the acre, (such as comes down the North River,) and harrow it in; and as stable manure may be had in the city of New-York for carting it away, I would apply a reasonable quantity of it on the land, and plough and harrow it in; and would then sow not less than four different kinds of grass-seed—say, timothy, red clover, white clover, and herds grass, and as much of each kind as farmers usually sow on upland when they do not intend to sow more than one kind; and I will guarantee, that the following season you will cut from three to four tons of fresh hay to the acre in the first and second mowings.

The reader is requested to note, that Mr. Dey has aimed at a much higher degree of cultivation than others may think necessary. Mr. Seely's experiments will show what the simple operation of merely sowing grass seeds, and turning on cattle, without digging, ploughing, or harrowing, has produced on the black mould, or what is sometimes termed peel ground.

And also what less than ordinary ploughing and harrowing has effected on that part which contains a mixture of clay, &c. which will be adverted to next week. Z.

INTERNAL IMPROVEMENT.

CHESAPEAKE AND DELAWARE CANAL.

We are gratified to find that the statements made respecting the practicability of making this canal, were predicated upon incorrect data, and that there is every prospect of its being completed in the year 1827. The very respectable editors of the Philadelphia Gazette, have been induced to give the subject some attention, and the result of their investigations may be comprised in these words: The difficulties which were encountered in St. George's Marsh, were not of a nature calculated to create uneasiness, as to the practicability of overcoming them, and it is believed the points of greatest difficulty are now surmounted, thus putting an end to any doubts as to what remained. From the nature of the ground, the earth used in forming the embankments has sunk deeper than was at first calculated; and this, so well as we can learn, is the only difficulty encountered that was not foreseen when the work was commenced. So effectually, however, has it been surmounted, that, as we are informed, this section will be completed within the present year, or very early in 1827, when the navigation will be perfect to St. George's village.

On the next section, which embraces St. George's Mill Pond, there never was any difficulty, and this part of the work is rapidly advancing.

The next section is that known by the name of the "Deep cut," on which a force exceeding fifteen hundred men is employed at present. The earth yet to be removed, does not on an average, exceed

fifteen to twenty feet in depth, and here no difficulties have ever occurred that could alarm the most timid. This portion of the work will be finished during the summer of 1827.

All west of the "deep cut" is now nearly finished, and in relation to this there never has been any uneasiness in the mind of any one.

From the Delaware river to the St. George's Marsh, we understand the Canal is finished, and 200 feet of substantial wharf work is built in the river, on each side of the Delaware Tide Lock, for the purpose of forming a harbour, which, when completed, will extend into the Delaware six hundred feet from the lock.

Over the "deep cut" at the Back tavern, is a substantial bridge, of a single span, exceeding 225 feet. And at the summit the canal is now sixty feet deep. [Balt. Gazette.

LADIES' DEPARTMENT.

HYACINTHS.

Double hyacinths, which are much more beautiful and estimable than those which produce single flowers, are, like the latter, known by the general distinction of reds, whites, and blues, with a few kinds of yellow, more recently obtained from seed. In many instances, double hyacinths have the peculiar advantage of a beautiful contrast of colour in the eye, or centre of their bells, which the single sorts cannot possess.

The roots* of double hyacinths may be planted at any time from the middle of October to the middle of November;† if it is done earlier, the plants will appear above ground in the middle of winter, which will render them liable to material injury from severe frosts; or if it is deferred later, the roots will be weakened by their natural tendency to vegetate, manifested by a swelling of the circle from whence the fibres proceed, which will be soon followed by an actual appearance of the points of the fibres, together with that of the foliage at the other extremity of the root, in the form of a small obtuse cone of a greenish colour.

The bed, on which they are to be planted, should be situated in rather a dry and airy part of the garden; a southern aspect is to be preferred, sheltered on the north and east by trees or buildings, at a distance from it proportionable to their height; if it is a common garden-wall or hedge, the distance of six feet will be sufficient. Care must, however, be taken to avoid the drip from trees, which is found to be prejudicial.

When the situation is determined on, the dimensions of the bed should be marked out, and the soil entirely taken away to the depth of at least two feet: the earth at the bottom must be dug up and comminuted, or pulverized, one spit or nine inches deeper, and the space above filled up with a compost, consisting of the following ingredients, in the annexed proportions, viz:—

- One-third, coarse sea or river sand;
- One-third, fresh sound earth;
- One-fourth, rotten cow-dung, at least two years old.

Earth of decayed leaves for the remainder.

The fresh sound earth of the compost should be of the best quality that the garden or adjacent country produces: it should be entirely free from noxious vermin of every description, particularly the hard yellow wire-worm, which is about an inch long, and prevails in most parts of the kingdom; it is extremely destructive to all kinds of tender vege-

* Or bulbs.

† For the climate of Scotland, Justice recommends "any time after the middle of September." This early period of planting is also adopted in the northern parts of Holland.

tables, and many of the hardy sorts, by penetrating to, and eating out, the heart of the bulb; and it sometimes proceeds up the stem of the plant. The only sure method of avoiding these worms, is to examine the soil very minutely, and if it contains any, to pick them out and destroy them. Some make use of rotten tan as an ingredient in the compost, but it generally retains some degree of astringency, which is pernicious to delicate flowers.

The ingredients, before mentioned, are to be well mixed and incorporated, and, about a fortnight previous to planting, the bed should be filled up with the compost to about four inches above the level of the path on the south or front side, and ten inches on the north side, so as to form a regular slope or inclination towards the sun.*

On planting the roots, the surface of the bed should be covered with a little fresh sandy earth, about one inch thick, raked perfectly smooth and even, and have the exact situation for every bulb marked upon it.

The plan, as described below, on minute investigation, will appear superior to any other that can be devised for elegance and simplicity; each bulb, those of the outside rows excepted, will be in the centre of a hexagon, and the whole at equal distances from each other. The width of the surface of the bed is four feet, the six rows across it are eight inches asunder, and the two outside rows are each four inches from the sides of the bed; consequently, the space between the centre of each bulb, is about nine inches and a quarter; each row contains three bulbs, and the letters R. W. B. denote the colour of the flower to be placed there, viz red, white, or blue; under these three heads, all hyacinths may be comprehended, except a few sorts of yellow, which may be classed with the whites.

R	B	W	R	B	W	R	B	W	R
W	R	B	W	R	B	W	R	B	W
R	B	W	R	B	W	R	B	W	R
W	R	B	W	R	B	W	R	B	W
R	B	W	R	B	W	R	B	W	R
W	R	B	W	R	B	W	R	B	W

On planting hyacinths, a little clean sand should be placed underneath, and likewise upon the roots, to prevent the earth adhering too closely to them;

* Below a compost nearly similar to that which has been described, Justice lays a stratum of well-rotted cow-dung, mixed with one-third part of sand. His reason for this is, "that the extreme parts of the fibres of the hyacinths may reach this layer of riches, and suck what is sufficient to furnish a strong flower for the succeeding year, to refurnish the great succulency of those strong stems and bells which they send out every year." *British Gard. Direct.* 272.

Mon. St. Simon, in his elaborate work (*Des Jacintes*), on the Dutch mode of cultivating the hyacinth, informs us, that the compost used at Haarlem, is rotten cow-dung, rotten leaves, and fine sand. The leaves of elm, lime, and birch, are preferred to those of oak, walnut, beech, plane, &c., which do not rot so quickly. The cow-dung is the droppings only, from cattle fed in stalls on dry food. The sand is procured in the neighbourhood of Haarlem, from a stratum of that material, deposited on one of hard undecayed timber, the remains of an ancient forest, which had been overwhelmed by the sea. The leaves are rotted by themselves, and, when fit for use, placed in triternate layers of sand, leaves, and cow-dung. The heap is commonly a ridge of cone, of six or seven feet in height: it lies untouched for six months, and is then turned, in which state it remains some weeks, and is then carried to the flower-beds. This compost retains its qualities six or seven years: the inferior kinds of hyacinths or narcissuses are planted in the first year; the second year the finer sorts are planted, and the remaining years a rotation is adopted, in which hyacinths alternate with tulips, jonquils, crocuses, &c.

the whole are then to be covered with sound fresh sandy earth, from three to four inches deep, according to the size of the bulb; when this is completed, the bed will be about eight inches above the level of the walk on the south or front side, and about fourteen inches on the north; it will look neater and have a better effect, if it is supported on each side with a strong frame of thick boards, or brick-work; and in order to preserve it from very heavy rains or severe frosts, it should be hooped over, and mats or canvas should be placed at hand ready to cover the bed on such emergencies; but it will not be necessary to defend it from moderate rains or slight frosts: for too frequent and long covering will deprive the roots of the due action and influence of the air, which ought to be avoided as much as possible: it were even better to run the hazard of incurring a slight injury by the omission of covering on some occasions, than overdo it to the certain detriment of the plants.

If frost is permitted to penetrate so far into the soil as to reach the bulbs, especially about the time that the plants begin to appear above ground, it will produce a singular effect, by causing some of them to shoot forth or discharge their stems and blossoms; but if the roots become entirely frozen through, they are in danger of being destroyed.

The earlier sorts will begin to open and shew colour about the beginning of April: it will be proper to screen such from the too powerful effects of the sun, which, if not prevented, would bleach and tarnish their colours, particularly the reds and deep blues; but, if they are properly defended from it, their colours will be preserved, and they will, in some measure, be kept back, so as to be in full bloom with the later sorts, especially if the roots of the early sorts have been planted about an inch deeper than the rest: it is a very desirable object to have an uniform bloom.

It will be necessary to support the stems, as they advance in height; for this purpose, small sticks or wires, painted green, should be forced into the ground, immediately behind the bulbs, either in an erect position, or leaning a little backwards, to which the stems are to be rather loosely tied, with small pieces of green worsted, as soon as they begin to bend, or are in danger of breaking with the weight of the bells; this operation must be repeated as they advance in height, for it is impossible to do it at one time so as to answer the purpose. When the greater part of the bed appears in colour, a covering, or awning, should be erected over it, and the path in front: the awning should consist of a strong frame of wood, ten feet high in the centre, and seven feet at the sides, covered with Irish or Scotch sheeting, or Russia duck, which will effectually keep out rain, and admit a great degree of light; it should come down close to the bed, on the north side, in order to preserve it from cold winds, which are prejudicial to the bloom.

The covering should be so constructed by means of lines and pulleys, as to be easily and expeditiously rolled up, or let down, as occasion requires, to afford the plants the full benefit of light and air, at favourable opportunities; that is to say, when the air is mild, and light clouds intervene, so as to let the sun's rays be admitted; and when the weather is severe, the covering should be let down, and the plants be protected from the cold winds and heavy rains.

family of Jabel Ingraham, Esq., at his farm in Seekonk, the present season.

The industry of the families in the interior of New England, cannot be appreciated without being seen. In the South, young females, daughters of planters, are generally lazy and indolent; in the North, the farmers' daughters are always industriously employed in plaiting straw, making pies, weaving, spinning, or, as in the present instance, manufacturing silk.

[N. Y. Advocate.]

[What say you to this, young ladies "in the South"?]

THE SLEEPING INFANT BOY.

A cherub boy,

Of days enough to lisp in broken words,
Which were all musick to a mother's ear.
Was fallen asleep. Within a few short hours,
The infant boy had sported at the foot
Of his young mother, clambered up her knee,
And clasped her neck within his baby arms,
And in her bosom buried up his face—
And once from that dear pillow did he lift
His eye to hers, as if to catch the soul
Of tenderness that beamed there for her child.
And when he saw her deep delight, he sighed,
Then smil'd, and in his childish, sportive mood
He buried up his face again—I went,
With the broad human current to the spot,
Where now he lay, all still and motionless.
He was asleep; his lip was gently curled,
And had a doubtful impress in its form,
Which made you hesitate to tell, in truth,
If it was joy or grief that made him wear
It thus—it was that form of lip that oft
Was seen, when he had struggled up to kiss
The cheek of her that bare him, in the way
Of kind atonement for some past offence—
His eye was just half closed—the weary lid
Had fallen thus far, and he seemed to sleep,
As conscious of his state, ready to wake,
When his pure spirit should be well refreshed,
To all his baby sports—Calmly he lay,
Wrapt in his lucid dress, whose whiteness well
Accorded with the paleness of his cheek,
And but for this, the fear that he would wake
No more, had scarcely crossed the mind of one
Who looked upon his features—but alas!
They laid him in a narrow building, made
For the dead—'twas neat, and one might e'en have
thought

That 'twas his cradle, but that it was close,
And, tho' in miniature, it yet was shaped,
As men's last dwelling houses always are;
It was his coffin. There was a coldness
On his brow, that met the lip maternal,
Frest full often there which spoke of death.
Still as she gazed upon him in his state
Of mortal loneliness, she almost saw
His little bosom heave, and half expected
He would awake to lisp the name of mother;
And a strange shuddering ran thro' all her frame
As th' closed up the lid above his face
And shut him from her sight for ever!

I saw them lay him in his infant grave,
And lightly did they cast the dust of earth
Upon his coffin, lest the sound should break
The breathless rest of the calm slumbering boy!

MISCELLANEOUS.

COAL MINES.

(From the Philadelphia Gazette.)

A friend has obtained for our use, "A Draft of the Comparative Altitudes and Distances from the principal districts of Anthracite Coal in Pennsylvania to Philadelphia and New York."

so drawn up as to present at one view the altitude of the different coal regions, and their distance from Philadelphia and New York. The altitude is marked on a scale at the side of the pages; the distance on a scale at the bottom. All the information (of which the following is a summary,) is the result of actual surveys:

TO PHILADELPHIA.

	Lockage.	Distance.
Lackawaxen,	1588 feet	317 miles.
Wilkesbarre,	500	275

(Via Delaware and Chesapeake Canal.)

Wilkesbarre, (via Lehigh,) 1279 . . .	162
Lehigh,	513 . . . 132
Schuylkill,	588 . . . 108

TO NEW YORK.

Wilkesbarre,	650 . . . 375
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(By the Delaware and Chesapeake Canal.)

Lackawaxen,	1432 . . . 217
Wilkesbarre, (via Lehigh,) 1279 . . .	192
Schuylkill,	738 . . . 208
Lehigh,	513 . . . 162

The point from which the altitude and distance of the Lackawaxen district is taken, is Keen's pond, which lies on this side of the Moosick mountain, over or around which there is to be a rail road.

The route of the Susquehanna and of the Delaware and Chesapeake Canal to this city, and of the Delaware and Raritan Canal to New York, has been followed in making the first estimate of the altitude and distance of the Wilkesbarre district.

In the second estimate, the route by the Lehigh and Delaware to Philadelphia, and, after leaving the Lehigh, by the Delaware and Raritan Canal to New York, has been followed. The summit level of the proposed Lehigh and Susquehanna Canal, is about the same distance from Wilkesbarre that Keen's pond is from Carbondale, which latter place lies west of the Moosick mountain.

Mauch Chunk landing is the point from which the altitude and distance of the Lehigh district have been estimated—to Philadelphia by the Lehigh and Delaware; to New York, by the Lehigh, and the Delaware and Raritan Canal.

The distance and altitude of the Schuylkill district, are given from Mount Carbon landing to Philadelphia, by the course of the Schuylkill; and thence, by the Delaware and Raritan to New York.

The distance and lockage, with similar ground and improvement, constituting the prime cost of artificial navigation, and, when the work is done, the prime cost of all transit to market, the value of this document must be apparent at a glance.

WOOLLEN MANUFACTURES.

At a meeting of Woollen Manufacturers from various parts of the state of Massachusetts, held at the Exchange Coffee House on the 23d inst., the depression of the woollen manufacture, and the causes which have produced it, were taken into consideration. A memorial to Congress for an increase of duty on woollen goods was drafted by a committee, which was unanimously adopted, and the committee instructed to forward it to Congress. The committee was also appointed to correspond with manufacturers in other states, to solicit the aid and co-operation of all who feel an interest in this important branch of our national industry. Res.

STAMMERING.

New Hampshire Specimen, &c. &c. on the subject of stammering, and prescribe the following, which are said to be the whole secret of those who profess to cure this disorder. Whether the same can be effected by Mr. Tappan's method, is not stated.

1. Commence speaking whilst *respiring*, or in other words, when the breath is gone out, and speak slowly. [Stammerers are said to have no hesitancy in singing, which cannot be performed without respiration.]

2. Place the tongue flat on the bottom of the mouth, before attempting to speak.

3. Begin by speaking short sentences and easy words.

4. Speak sentences with easy words at the beginning, and terminating with hard ones.

A Mr. Trescott, of Providence, R. I. who was thus afflicted for thirty years, saw these printed directions, and on the very first experiment, was enabled to speak without the usual stammering. Four other persons, to whom he recommended the directions, were as speedily cured as himself.

A negro drayman, of Charleston, S. C. whose efforts to speak, it was painful to witness, was wholly cured in two hours by Dr. De La Motta, on Mrs. Leigh's system.

Mr. Bennet Tomlinson, of Talbot county, Md. raised on a lot of eleven acres, the present year, 126 barrels of corn wanting one-tenth; of this quantity, there were 120 bbls. of what is called long corn—the ground was prepared and planted about the 10th of April, three feet apart each way, and two stalks left to a hill.

[*Easton Gazette.*]

BARLEY, which used to be thought high at 40 cents a bushel, will now command 80 or 90. This is occasioned by the increase of breweries. Farmers would promote temperance, and render their acres more profitable, by substituting beer for spirits.

[*Portsmouth Journal.*]

Munificent.—A communication has been received by the Board of Aldermen, from WARD NICHOLAS BOYLSTON, Esq., offering for the acceptance of the City, for the use of the inmates of the House of Industry, a twin pair of oxen, 7½ years old, weighing 4992 lbs. raised at his farm at Princeton, and which have never been yoked. The communication being read, it was ordered, that the thanks of the Board, in behalf of the city, be presented to Mr. Boylston for his liberal donation.

SPORTING OLIO.



ON TRAINING.

(From the Annals of Sporting.)

The following observations were received from Mr. Sandivir, an eminent surgeon, residing at Newmarket:

W. SANDIVIR presents his respectful compliments and hopes Sir John Sinclair will excuse his not having answered his favour of the 7th instant, he not having been able to obtain sufficient information to do it earlier, and the following answers are the best he is now able to give to the queries Sir John has been pleased to favour him with.

1. How long the training of jockies generally continues?

With those in high repute as riders, in a greater or less degree, from about three weeks before Easter to the end of October; but a week or ten days are quite sufficient for a rider to reduce himself from the weight he is naturally of, to sometimes a stone and a half below it.

2. What food do they live on, both solid and liquid, and what quantities are allowed them of each?

For breakfast, a small piece of bread and butter,

with tea, in moderation. Dinner is taken in a very sparing way; a very small piece of pudding, and less meat; and when fish is to be obtained, neither one nor the other are allowed; wine and water is their usual beverage, in the proportion of one part wine to two of water. Tea in the afternoon, with little or no bread and butter, and no supper.

3. What exercise do they get, and what hours of rest?

After breakfast, having sufficiently loaded themselves with clothes, that is, five or six waistcoats, two coats, and as many pair of breeches, a severe walk is taken, from ten to fifteen or sixteen miles; after their return home, dry clothes are substituted for those that are made very wet and uncomfortable by sweat; and, if much fatigued, some of them will lie down for an hour before dinner; after which no severe exercise is taken, but the remaining part of the day is spent in that way that may be most agreeable to themselves. They generally go to bed by nine o'clock, and continue there till six or seven the next morning.

4. Are they purged, and what purges, or other medicines are given them?

Some of them, that do not like excessive walking, have recourse to purgative medicines; two ounces of Glauber salts is the usual dose, and it is very seldom that any other medicine is had recourse to.

5. Would Mr. Sandivir recommend a similar process to reduce corpulency in other people, whether male or female?

W. Sandivir would certainly recommend a similar process; to reduce corpulency in either sex, as, from experience, he perceives that the constitution does not appear to be injured by it; but he is apprehensive, that hardly any person could be prevailed upon to submit to such severe discipline, who had not been inured to it from his infancy.

The only additional information W. S. has the power to communicate is, that John Arnall,* when rider to his royal highness the Prince of Wales, was desired to reduce himself as much as he possibly could, to enable him to ride some favourite horse, without his carrying more weight than was agreed upon; in consequence of which, he abstained from animal, and even farinaceous food, for eight succeeding days, and the only substitute was now and then a piece of apple; he was not injured by it at the time, and is now in good health; added to which, Dennis Fitzpatrick,† a person at this time continually employed as a rider, declares that he is less fatigued by riding, and has more strength to contend with a determined horse, in a severe race, when moderately reduced, than when allowed to live as he pleased, although he never weighs more than nine stone, and frequently has reduced himself to seven stone seven pounds.

New Market, 25th June, 1805.

GAME SHOOTING.

(From the Farmer's Chronicle, of Nov. 1825.)

Mr. Montgomery, of Warfield, Berks, undertook on Monday to kill 60 head of game in eight hours, with a double-barrelled gun, to hunt and to pick up his own game. The number killed was as follows, on the Oxfordshire hills, to the westward of Henley-upon-Thames. Mr. Montgomery breakfasted at Shiplake, three miles from where he started, having bagged in three hours 16 hares, 9 pheasants and 8 partridges—total 33. At four o'clock in the afternoon, the shooter having finished at Playhatch, three miles from Reading, the whole produce was 26 hares, 22 pheasants, and 14 partridges, winning the match of 50 sovereigns by two head. Partridges were scarce and wild.

* Died May 29th, 1811, aged 62.

† Died June 27th, 1806, aged 42.

Berkeley Frampton, Esq., and Captain Cobb, of Shiplake, near Henley-upon-Thames, undertook on Tuesday, for 200 sovereigns, to kill 70 head of game, within three miles of Shiplake, in the course of the day. The gentlemen shot over the Oxfordshire hills, on the northern side of the road, and their principal sport was with pheasants and hares, the partridges being very wild. Each bagged as follows: Mr. Frampton, pheasants 17, hares 14, partridges 8—total 39. Captain Cobb bagged, hares 13, pheasants 12, partridges 9—total 34; making 73, and winning by 3. The parties shot at every thing, and had markers and fetchers to attend them.

The first meeting of the Crack Pigeon Shooting Clubs took place on Monday, on Chobham Common, or Bagshot Heath, between seven members of the Ashton, and seven of the New Hats Club, for 100 sovereigns aside, the usual distance of 21 yards from the trap, at 11 birds each.

New Hats.	killed.	Ashton.	killed.
Mr. Frampton,	10	Mr. Giles,	9
Mr. Flint,	9	Mr. Henniker,	8
Captain Smith,	8	Mr. Goodchild,	8
Mr. Jones,	8	Mr. Hornby,	7
Mr. Fortescue,	7	Mr. Kuber gall,	7
Mr. Hull,	7	Mr. Musgrove,	7
Mr. McQueen,	7	Mr. Howell,	3
	—56		—49

HUNTING SONG.

Of horns, and of echoes, that through the woods ring,

And of lads full of mettle and soul,
And of gay sporting boxes let other bards sing,

Merely built for the chase or the bowl;
I bring you, of sportsmen, a true and try'd knot,
Who sport a snug box, call'd Humanity's cot.

Is honour in danger, worth sunk by its fears?

On those coursers, their wishes, they're borne,
To hunt vice to the toils, and to dry virtue's tears,

As the sun melts the dew of the morn:
Then join, of true sportsmen, so noble a knot,
The good lads that inhabit Humanity's cot.

What chace a delight can more glorious yield,

Than to hunt in so noble a track?

Vice and folly the game, wide creation the field,

And the vot'ries of honour the pack:

Rejoice then, ye sportsmen, who're thrown by fate's lot,

'Mongst the lads that inhabit Humanity's cot.

Return'd from their toil, with life's comforts well stor'd,

Reflection their food gives a zest;

Health seasons the viand that smokes on the board,

A clear conscience invites them to rest:

And sweet are the slumbers that fall to the lot,

Of the lads that inhabit Humanity's cot.

Then let each English sportsman these maxims embrace,

Who the spoils of true honour would share;

All that's noxious to hunt to the toils in life's chace,

All that's harmless and useful to spare:

So the blessings of thousands shall make up their lot,

And each sporting-box vie with Humanity's cot.

EDITORIAL CORRESPONDENCE.

DEAR SIR,

Galway, October 24, 1826.

The season has been very dry; perhaps more so than ever was known before in this place. We had little or no rain from the middle of April to the middle of June; and from the 1st of July unto the 15th of September. Of course, our crops are

hort—not more than half a crop of wheat and hay, and two-thirds of a crop of corn, and other spring grain. I found that my crops stood the drought as well, if not better than my neighbours, which has confirmed me more in my mode of culture.

I remain, with great respect,

Yours, &c.

EARL STIMSON.

J. S. SKINNER, Esq.

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 10, 1826.

“Render unto Cæsar the things which are Cæsar’s.” The amusing and spirited account of the TREE HILL RACES, published in this paper of the 27th ult., was taken from the Richmond Whig. We never had an idea that the publick would suppose that these accounts of races in the different parts of the country, were written by ourselves. The fact is, that we have written scarcely a word for that head of our paper, taking scraps here and there, as we could find them.

“Extensive cultivation is carried on by the United States’ troops at Council Bluffs, and at many other of our military posts; though not at any of them so extensively as at the former station, for none other is so self dependent for its necessary supply of vegetables, fruit, grain, &c. According to the regulations of the War Department, in which so many important improvements have been introduced of late years, it is, we believe, made the duty of the surgeon, or some other officer on the post, to transmit regular meteorological observations. Some curious and valuable facts, connected with the interests of agriculture and horticulture, might be established, if it were practicable (as we should suppose it was,) to obtain in the same way authentic and systematic remarks upon the effect of our various climates upon vegetation. The time of the sprouting, the leafing, flowering, ripening, &c., of grasses, grain, esculent vegetables, forest and fruit trees, &c. might be stated at each place, from which a general table for all our latitudes might be made up and presented at one glance. The view of these facts would enable us to judge without consuming time for actual experiment, how far it would be practicable to introduce in particular latitudes, products hitherto a stranger, but which might be introduced with as much advantage as was the guinea grass to Jamaica, which it relieved from dependence on foreign supply for one of the most important articles of subsistence—beef.

If, for example, the meteorological table should shew that at a particular place frost did not commence before, nor last longer than a certain number of months; and the table of vegetation at another post should shew that cotton, or Indian corn, or potatoes, or any other of the rich offerings of Ceres, or the countless beauties of Flora, required only a like period to display their signs of animation, the question of adaption to a given climate would be thereby settled; and time need not be lost by too cautious and limited experiments on the one hand, nor by fruitless attempts at what these tables would shew to be physically impracticable on the other.

After all, it is most probable that every thought which has been here so crudely presented, has been systematized by the Department, which appears to have the means of arriving at the practical results; but we apprehend that the scheme has not been carried so far as to provide for the collation of the facts and their publication, in a form to shew their bearing upon the general interests of agriculture and horticulture. In 1823, we were officially informed, “that cultivation by the troops was carried extensively at Council Bluffs, (on the Missouri,)

and St. Peter’s, (on the upper Mississippi;) that publick grounds were also cultivated at the following military posts and stations, though on a less extensive scale: Natchitoches, (Red River,) The Sulphur of Red River; Fort Smith, (Arkansas;) Fort Edwards, (upper Mississippi;) Fort Armstrong, (do.) Prairie du Chien, (do.) Green Bay; Mackinaw; The Sault de St. Marjes, (outlet of Lake Superior;) and Saganaw Bay, on Lake Huron.”

“Not to put off until to-morrow what may be done to-day, is a motto as applicable to the business of a farmer as to any other, and especially in regard to the *plantation of trees*. The truth of this is illustrated by a remarkable fact, mentioned in this office yesterday, by an elderly gentleman of great judgment and observation. He said that he was on the farm of a son-in-law, superintending the planting of an apple orchard of three hundred trees, when he heard the news of the war in 1812, and that the proprietor of that orchard is fully of opinion that it bears fruit enough this year to make *ten thousand gallons of cider!* Think of that, procrastinators! Ye who are too selfish to plant, for fear that *your children* only can gather the fruit!

“We have already received several ears of corn, and hope yet to get as many more as will give greater variety to the collection for the *American Museum at La Grange*.

COMMERCIAL RECORD.

FROM LIVERPOOL.—The ship Orozimbo, Capt. Thomson, arrived here this morning from Liverpool, having sailed thence on the 29th of September—four days later. She did not however bring any papers of a more recent date than had been received by previous arrivals. A commercial friend has favoured us with an extract from a letter containing cheering intelligence respecting the cotton market at Liverpool, and the state of affairs at Manchester.

“Liverpool, Sept. 28.

“We have again had a very good demand for Cotton to-day, and the sales are supposed to be at least 5000 bags, partly to the trade and partly to speculators. The advance in the present week is not less than a ½d per lb.; but is chiefly on the middling and fair qualities of Upland and Mobile. We quote now at 6½ to 7½d. The accounts from Manchester are very favourable—a great deal of business having been done, and some advance in prices obtained. There is at last an arrival of Rice, which is not yet landed. The Grain market is very dull, and Flour neglected at 22 to 23s. per barrel. *Ashes* are again in more request at 26 to 27 per cwt. About 4500 bbls. Turpentine have been sold at 9s. 6d. to 10s. 6d. per cwt.

AMERICAN ECLIPSE.

The owners of this Horse have determined that his season (at the stable of Mr. Potter, near Baltimore,) shall positively close on the 15th of December. He will then go to Richmond, for the spring season, and will, in all probability, remain in the South, at least until the existing laws of New Jersey (where he is owned,) shall be so altered as to encourage the breeding of turf horses.

Baltimore, Nov. 9, 1826.

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Memoir on the expediency and practicability of improving and creating Home-Markets for Agricultural productions and Raw Materials, by George Tibbits, continued—Columella, on Yolk in Sheep—Middleburgh Show and Fair—Newark Meadows—Chesapeake and Delaware Canal—On the culture of Hyacinths—Manufacture of Sewing Silk in New England—The Sleeping Infant Boy, Poetry—Altitude of Coal Mines in Pennsylvania—Woollen Manufactures—Cure for Stammering—Scraps—On Training for the Turf—Game Shooting in England—Shooting for a wager in England—Hunting Song—Editorial Correspondence—Editorial remarks—Advertisement.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	6	10	9	12
BEES-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16½	17½	20	22
Havana,	—	14	17		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	28	30		
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	11	12		14
CHEESE,	—	8½	10	12	15
FEATHERS, Live, . . .	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed,	—	5 50	6 00		
FLAXSEED,	bush	7 75	80		
FLOUR, Superfine, city,	bbl.	5 00	5 12	5 25	6 25
Fine,	—	4 75			
Susquehanna, superfi.	—				none
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	52	55		
white	—	52	55		
Wheat, Family Flour,	—	1	1 12½		
do. Lawler, & Red, new	—	95	1		
do. Red, Susque. . .	—	95	1 00		
Rye,	—	75			
Barley,	—	1 12½	1 22		
Clover Seed, Red . . .	bush	4 50		5 00	
Ruta Baga Seed, . . .	lb.	87	1 00		
Orchard Grass Seed, .	bush	3 00		3 50	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	4 00		4 50	
Oats,	—	48	50		
Beans, White,	—	1 25	1 50	1 87	
HEMP, Russia, clean, .	ton	200	210		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	25			
HOGS’ LARD,	—	7	10	12	
LEAD, Pig	lb.	6½			
Bar	—	7½			
LEATHER, Soal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	46	50	62½	75
Havana, 1st qual. . .	—	30	32	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter .	—		75	88	
PORK, Baltimore Mess,	bbl	11 00			
do. Prime,	—	8 00	8 50		
PLASTER, cargo price,	ton.	3 50	3 62½		
ground,	bbl.	1 50			
RICE, fresh,	lb.	3½		5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	8	10	12
WHISKEY, 1st proof, .	gal.	33½	35	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	29		50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—		10 75		
Louisiana,	—	9 25	10 00	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	16		25	
SALT, St. Ubes,	bush	43		75	
Liverpool ground . .	—	48		75	
SHOT, Balt. all sizes, .	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Claret,	doz.	4	8	5 00	8 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl’d	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinnners’ or Pulled, .	—	20	25		

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AGRICULTURE.

HOME MARKETS—AGRICULTURAL PRODUCTIONS AND RAW MATERIALS.

(From the Memoirs of the Board of Agriculture of the State of New York.)

A Memoir on the expediency and practicability of improving or creating Home Markets for the sale of Agricultural Productions and Raw Materials, by the production or growth of Artizans and Manufacturers—by GEORGE TIBBITS, of Rensselaer county.

Read before the Board of Agriculture of the State of New York, March 8, 1825.

(Concluded from p. 267.)

These powers are applied at the discretion of Congress, and include, not only the power required to be exercised in this particular case, but it is believed to be imposed upon that body as a duty, to protect and promote the rights and interests of their own country, and each, and every class, section and individual, against the aggressions and cupidity of foreigners, and to regulate the whole concern in such manner as to produce the greatest practicable benefit to our constituents.

This will appear to have been the intention of the framers of the constitution, as well from the exposition given of those powers, at, and about the time of the adoption of that instrument, as from the early practice of the government under it, in the imposition of discriminating duties, favourable to the ships and shipping interests of this country; granting bounties to fishing vessels; prohibiting all trade from this country, to some others, in foreign vessels. The tonnage on vessels, and duties payable on goods, were all so arranged and imposed by Congress, and that, directly after the adoption of the constitution, as to induce shipments in the vessels of this country, in preference to any other, and at a time also, when the country had but a very few seamen and vessels. By such means, Congress cherished and elevated the ships and shipping interests of this country, to their present exalted standing.

As a further evidence, however, of the clear understanding of the framers of the constitution, as to the powers vested in Congress, in relation to the protection of manufactures, the first Congress, (who were many of them members of the Convention which framed the constitution,) in the preamble to the first act passed by Congress, imposing duties on imported articles, the protection of manufactures is stated as one of the inducements to that measure. "Whereas it is necessary, for the support of government; for the discharge of the debts of the United States; and for the protection and encouragement of manufactures," &c.

The framers of the constitution and members of the first Congress, must be presumed to be better able to determine what were the powers intended to be vested in Congress, than the younger commentators of the present day.

The great preference compelled and enforced by Congress, to be given to the ships and shipping interests of this country, for a time bore hard upon the farming or landed interest. It was not complained of, however, except by the southern states, who owned no ships, and never expected to own any. The consequences from this forced preference to the ships of this country, has resulted in growing and raising up within it, a stock of mariners, ships, ship-builders, sail-makers, capital, and shipping concern, such as is hardly to be found in any other. The institution was at considerable, but temporary expense to the country. We had to pay higher duties, or ship in the vessels of our own country at higher freights. Our number of vessels and seamen were very small, and, but for the pre-

ference given by Congress to the temporary prejudice of the landed interest, the number of ships and mariners might have remained small to this day. But the benefits soon resulting to the country greatly exceeded the incipient expense. Ships and seamen multiplied; a strong competition ensued, and reduced freights and charges of all kinds, to the lowest possible grade. It proves in every point of view, a great benefit to the country, in seeking for markets for its productions, and by carrying them, at the cheapest rates, into every part of the world, where they can find admittance and a market.

When Congress first determined that this branch of business should be established in this country, and to that end gave to it the required protection, there was not only an ostensible, but an absolute want of hands to carry it on. Our vessels having the preference, those of other nations had less to do. Their sailors having less to do in their own vessels, sought for, and found employment in ours, in the same manner as their cloth-makers would now find employment in our work-shops, if Congress should, by like protecting duties, cause a preference over those of all other countries, to be given to cloths made in this country, from the wool of our own sheep, and by artizans who should, while making them, give to our own farmers, the benefit of a home market, for the provisions and bread stuffs required for their support. The English could not resort to our work-shops, to get back their cloth-makers, as they did to our ships, to reclaim their seamen; which, more than any thing else, brought on the late war, and thereby, incidentally brought an expense upon the country of many millions. But it has now become evident that Congress consulted the best interests of the country, by instituting and protecting this branch of national wealth and industry, at any hazard, and at any given expense. The objection, therefore, to giving protection to manufactures, comes with an ill grace from the ship owners, who, from a like protection to their ships, have become rich.

The southern, or cotton, sugar and tobacco-growing states, complained as loudly against the protection given to the shipping interests, as they now do at the required protection to manufactures. It is remarkable that they never complained at the exercise of that power by Congress, when applied to secure the home demand for the articles of their chief dependence. But the exercise of this power by Congress, long since produced the desired effect, as well upon the shipping interest, as upon the growing of cotton, sugar and tobacco. It has not only encouraged the improvement of their lands, and secured to them the home market, but it has enabled these interests to supply foreign demand to a great extent. They may now all tell us that the Congressional protection is of no use to them. The coarse cotton cloth makers may say the same as it relates to that article. They have both secured the home market, and considerable foreign demand, by the effect of Congressional protection; but the fine cotton fabrics, woollen and hempen goods, still require further protection. That the protection now provided for the articles last mentioned, has not produced the effect which it has done for the shipping, the cotton, sugar and tobacco growing interests, is evident from the large quantities which are still imported; and nothing more is requested than that it shall be increased until it has produced that effect.

The only agricultural articles for which there appears to be an efficient foreign demand, are cotton, tobacco, sugar and rice; to the growth of which our climate is not adapted, and the northern states are left without any commanding article for exportation. We have continued our ancient practice of raising bread-stuffs and provisions, in the confident expectation of foreign demands for them, in exchange for woollen cloths and other manufactured

articles, until, upon their being refused in exchange, we find ourselves suddenly reduced to poverty. The remedy is obvious. Shut out the manufactured articles, or commence upon that plan, and from time to time progress upon it. Give assurances to the adventurers in manufactures, that their investments shall not be sacrificed, and we shall very soon create home markets for all the raw materials and productions of our land, and find ourselves supplied with manufactured articles, upon better terms than they are now imported. The cotton-growers will thereby secure to themselves an enlarged home market, where they may be under no apprehensions of being supplanted by Egyptian competition, or by wars.

The acts of England, in refusing to take the agricultural productions of the northern states in exchange for her manufactures, ought to be considered by us in the light of friendly and paternal admonitions. These acts may reasonably be construed as saying to us, "you are of age; you have left the family; make your own clothing; your welfare demands it of us to compel you to do it; you are capacitated by God and by nature to become a great and powerful people, and to extend the language, the religion, the laws, customs and manners of England over immense regions; and even to exceed the mother country in these respects; but you never can arrive to that state, until you acquire and domesticate the mechanic arts, upon which that elevated station is mainly dependent. Europe has millions of artizans who would flock to your shores; add to your numbers, and teach your rising population the necessary arts, if you would give them protection, until they have firmly established themselves among you. You have the history of our rise; avoid our errors and unnecessary wars; exclude foreign manufactures, and you will soon have the necessary stock of artizans, and a home market for all your agricultural productions."

I should consider it a great misfortune, if England should withdraw this admonitory advice, and again admit our bread-stuffs, provisions and raw materials. It would have a tendency to prevent us, for a long time, from rising to that solid and permanent elevation to which, by her policy, we are now fast approaching, and to which we may very soon attain by proper management. We want, in addition to the obstructions which she throws in the way of importations, such further obstructions raised by our government, as shall create the fullest confidence in manufacturing undertakings in the country. That done, we shall soon draw into the country a great addition to our present population, not of the description of mere ditch-diggers, but of intelligent artizans. The inducements to emigrations of this description, would probably be greater than any which the settlement of new lands has ever held out.

The importing merchant, of all others, ought not to complain at the measures proposed. If they lose the importing profit on the particular article which protection is asked, they, together with the shipping merchant, will find an abundant compensation from the increased quantities of commodities still remaining to be imported. The importers will find, moreover, that about all the articles proposed to be made in this country, must still pass through their hands. A large proportion of the coarse cotton cloths now made in this state, are sent to New York, in the first place; from thence they are distributed through the country in parcels, to suit customers, or pass through the hands of shipping merchants to foreign markets. Our rent-receiving men will find their interests promoted by these measures, as thereby their rents will be increased or maintained. Our interest and dividend-receiving men will find better employment for their capitals; the salaries and fees of our officers of government and professional men will be better paid, and every description of

will have the gratification of beholding the general prosperity of the country.

It is maintained by some of the oldest and most forward manufacturers, whose establishments had their rise in the early stages of the embargo, that manufactures do not require further protection in this country.

It is with difficulty this opinion can be reconciled with pure intentions. In the absence of all necessary proof, we are led to attribute it to the overbearing influence of self interested motives.

The manufacturer who has once passed the initiatory state, had rather encounter foreign competition in his particular branch, with the existing duties and charges against the foreigner, than the competition which he is sure must arise in this country, if the necessary protection to new adventurers is granted, but which he well knows never can arise without that protection.

Apprehensions are entertained in the southern states and elsewhere, that if we manufacture for ourselves, we shall excite the displeasure of England, and that to retaliate, she will exclude the raw cotton and tobacco of this country.

England understands her interests too well to exclude an article of so much importance to her as cotton. She well knows that, by excluding it, she will advance our manufactures and injure her own. She will avoid any measure which will reduce the price of that article in this country, or in France, or any other country, much below what it is in England; and the price would be as much lower in this, and every other country, than in England, as all the duty, or discouragement which she imposed on it, would amount to, and a correspondent disadvantage to her manufacturers. She has a deep interest at stake, and will continue to receive cotton from this and every other country where she can obtain it cheapest.

Manufactures are objected to, as having a tendency to debase and demoralize the community, to increase criminality, and the number of paupers.

There exists no natural cause for that result. On the contrary, as they give employment to a greater variety of people, by enlarging the number of lawful and innocent pursuits, the natural tendency must be to improve the habits of the people to virtue. That opinion, however, is not a new one. It was insisted upon in England until it led to investigation. On comparing three of the most manufacturing counties with three others, mainly employed in agriculture, it was found that the agricultural counties, in proportion to the number of people, exceeded the manufacturing counties in paupers 100 per cent.—in criminal cases 60—and in poor rates 150 per cent. Colquhoun on Indigence, page 272, declares that, "contrary to the generally received opinion, the number of paupers in those counties chiefly agricultural, greatly exceeds those where manufactures prevail."

Commerce, without manufactures, may be productive of the evil consequences predicted; but manufactures have the opposite tendency. They keep every body at work, and of course, out of mischief. But it would be a useless waste of time and words, to attempt to refute or treat seriously, all the frivolous objections to the introduction and proper protection of manufactures.

GENTLEMEN—

The measures hitherto pursued by the Board of agriculture and agricultural societies, may have been productive of benefits equivalent to the expense and attention which has been paid to them. But whether they have or not, from the circumstance of their distribution through the country, they are well calculated for investigation in relation to the benefits which may be derived from the introduction of manufactures.

commensurate with the wants of the community. That the benefits would be great to the landed interest, the universal experience of all countries has demonstrated. Markets for agricultural produce, at fair remunerating prices, are required by the landed interest, rather than a more perfect knowledge of the art of raising it, or enlarged quantities for which there is no market. The agricultural societies may have improved the art of raising landed productions, and thereby may have contributed somewhat towards increasing the quantity. Without abandoning their duty in that respect, it is believed that they would, to a much greater extent, promote the landed interest, by endeavouring to provide home markets for the sale of landed produce, than by their endeavours to have larger quantities raised, while there is no efficient demand for it.

Foreign commerce, from the causes already noticed, is incapable of providing markets for agricultural produce. We are to look for home markets, and these, like every thing else, may be improved, or may be made. By adopting means adequate to the object we shall acquire them.

We now import from abroad, and consume more than thirty-one millions of dollars worth of manufactured articles; and the consumption would be three times that amount, if they could be obtained for the produce of the land at fair equivalent values.

Give to manufacturers protection, and they will come to us from abroad. Give to artisans protection, and they will increase from our present population. Obtain the adequate number, and their consumption of agricultural produce will be immense, and much greater than any quantity which we have ever exported. Give to the manufacturers of other articles the protection which has been given to the coarse cotton-cloth makers, and we shall soon have the required number of artisans, and home markets for all our agricultural productions.

It may be asked, what can the board of agriculture, or the societies do, towards effecting measures of such magnitude, opposed by long standing opinions, habits and interests? It may be answered, that both directly and indirectly, they may do much. Information relative to arts, processes and trades, may be elicited, collected and distributed. The natural advantages of the country for manufacturing may be communicated to foreign countries, and foreign adventurers disposed to settle here. Strangers may be advised and directed to advantageous locations. But they may probably, more than in any other way, be useful, by inculcating correct principles and views through the community, as to the true interests of the country, in relation to these subjects—for it may be recollected, that public opinion, although fluctuating, carries every thing before it. It is the pioneer to almost every public measure.

The board of agriculture and the societies, have first to settle upon what are the measures which may be beneficially and safely adopted. They may search for facts and precedents to illustrate the propriety of those measures. They may support and give effect to the measures of government, tending to the furtherance of the main object, wherever the influence of their opinions may be extended. The Board of Agriculture will become the centre for interchanging opinions, views and information, as to the operation of measures which may have been adopted, and what further measures are required.

It may be useful at this time to compare opinions, as to the articles, the future importation of which should be prohibited, or on which heavier duties should be imposed. All these matters invite the most deliberate consideration of the Board.

The articles of beer, ale, and porter; cheese, and other articles, in which the landed interest has a great stake, are subjects which should be carefully considered.

To inspire adventurers in the manufacture of articles made of wool, with the necessary confidence, it is deemed to be proper that progressive annual additions should be made to the existing tariff; and the same as to the finer cotton fabrics, and to articles made of hemp; and, perhaps, iron. Building-slate, is another article which this country is capable of supplying to the full extent of the home demand, and at prices not exceeding the cost of that article, when the quantity brought from abroad, was not met in our markets, by slate made in this country. It is usually brought to this country as ballast, and did sell, and would now sell, above the present prices, if there should be none made here. But being brought rather as ballast than as freight, it is sometimes very much below even the price paid for it abroad. Our slate-makers are then driven from the market, and their works stopped. Quarries get filled up with rubbish and water, the buildings and fixtures go to decay, and even importations become more limited for want of sale. The market gradually improves to a price at which slate may be again made; but on looking round for hands, it is found the old stock have gone off, some in one direction and some in another; some to Michigan, and elsewhere, and perhaps an entire new set are to be learned the trade, the works cleared out, and every thing commenced anew; and when, perhaps, fairly under way, in comes another, or numerous other parcels from abroad, the price declines immensely, and our works again stopped.

These frequent fluctuations of prices drive our men from this branch of business; well knowing that, if undertaken, they have no security against those surfeits from abroad. It would seem to be evidently proper, to protect our slate-makers, when it can be done without prejudice to the consumers. There can be no doubt but that they could and would supply the market at the average prices which the article would cost the consumers, if there was none to be made here; and it is highly probable that a competition among them would reduce the price to much less.

To effect this object, let the average price of slate in this country, be found from, say 1790 to 1800, when the article was nearly all of it brought from abroad: and let it be enacted, that no foreign slate should be brought in, when the average price, for the three preceding months, was below that price, but admit it when above, until it again declined below that price. By adopting this rule, and trusting to the competition among the slate-makers of this country, it may reasonably be expected, that the cost of this article will be reduced to the lowest practicable price, and probably much lower than it ever will be, while the existing fluctuations and discouragements are perpetuated.

GENTLEMEN—

The policy and measures contended for, have intrinsic merit, and must ultimately prevail. They are founded on the maxims and policy of the most prosperous nations of Europe. They come to us with the recommendation of their ablest statesmen. Either the policy pursued by those nations or ours, is radically wrong. The governments, who have for any length of time conformed to their maxims, have become rich. Under ours, we have become poor, and the consequences of a reverse of their policy, may be seen in the poverty of all the nations who have neglected their admonitions; among others, we may name Spain, Portugal, Poland, and our own.

Some nations have the misfortune to labour under disabilities, which may forever keep them in the back ground. Their forms of government may be defective—the freedom of the citizen may be limited—property may be insecure—the geographical or physical condition of the country may be unfavourable. In this country, we are favoured by

none of these difficulties. Our country is rich in natural productions—with an extensive sea-coast—good harbours—navigable rivers, with innumerable water falls; and is making rapid advances in artificial canals. Our climate is temperate and salubrious—property secure—the government, and all its measures, are determined by public opinion, as they ought to be. But, in common with many other countries, we entertain prejudices which are fostered by the agents of foreign commerce, and individual interests. A great majority of us, are, from education and habit, agricultural. But that class, from their peculiar situation, will be led to the investigation of these subjects. They will not much longer remain the dupes of cupidity. They will soon entertain feelings more friendly to manufactures, and demand the attention of their representatives in Congress, to regulate all these matters in such manner as to promote their true interests.

BRIGHTON CATTLE SHOW REPORTS.

No. 1.

Report on fat Cattle, Bulls, and Bull Calves—Committee, John Lovell, Luke Fiske, and Jeremiah Baker.

These public exhibitions for the encouragement of farmers, originated in Great Britain, were soon after adopted in France, and in this country were first introduced by the Berkshire Society in Massachusetts. In the European countries they were used with great moderation. One only in Great Britain, at Smithfield, was an annual one. The Bath and West of England Society occasionally exhibited a show of their animals, and offered premiums for ploughing matches. The American farmers, from the nature of our institutions, and the spirit of rivalry produced by them, were not contented with single shows confined to local districts. As soon as the spirit was excited in Berkshire, it was copied by the parent Society—the old Massachusetts Agricultural Society—and at great expense they provided the means, with the aid of public benefactors, of an annual cattle show at Brighton. The spirit thus excited, could not be bounded by local restraints, and there sprung up similar associations throughout all New England. It is not our design at present to enter into the inquiry, whether they have, or have not, been productive of benefit to the farming interest.

We confine ourselves simply to the fact that a deep interest has been excited by these shows, whether they have been of public benefit or not. It is a part of the constitution of human nature, that excitement should be followed by a state of indifference, sometimes of disgust; and it has been alleged, that such is the state of public feeling with relation to these Exhibitions.

It was even predicted the last year, that we should never have another exhibition at Brighton, or if we should persist in the attempt, it would be an entire failure.

It is true, that whenever the farmers shall cease to feel an interest in these shows they must fall, and they ought at once to cease—their utility depending entirely upon the zeal of those for whose benefit they were designed. It is true, also, that the merchants and gentlemen of the metropolis, who, with laudable spirit, first patronized this institution from motives of the most praiseworthy character, would naturally get tired of it. The novelty, to them, was its principal charm. But the great question is, have the farmers lost their interest in it? So far is this from being true, we state upon our own careful examination, that the farmers, at first viewed these shows with distrust. They did not think them their own. They were jealous of the "gentlemen farmers," as they unkindly called them; and the first shows were supported principally by the Trustees of the Mas-

sachusetts Agricultural Society, and by the educated men of the city. This state of things has been changing from year to year; and the substantial yeomanry, the actual cultivators, have regularly increased their support and enlarged their confidence. There are, to be sure, fewer female visitors, and of course a smaller proportion of the *beau monde*. There is a very great falling off in the multitudes from the city, who expected a day of hilarity and low dissipation; but the visitors from the country have been constantly increasing, while the more sober, and reflecting, and intelligent citizens of Boston have continued and will continue, to afford their valuable and rational countenance to an institution which is useful to the republic in every view, the most important of which, they are sensible, is the conviction which they produce on the minds of the farmers, that their interests are intimately blended with their own.

Let us recur to the question—are these shows becoming tiresome and indifferent to the farmers? We have no means of exciting them beyond our premiums; we use none—no artificial, extraordinary means. Yet our pens this year were entirely full. The number and quality of the fat cattle has exceeded those of former years, all the circumstances considered. We have had once, and once only, overgrown cattle, fed at an enormous expense; but we soon put an end to this folly, by declaring that we would not give our premiums to the fattest animal, but to those which had the most profitable flesh, and fatted at the least expense.

You are therefore no longer to expect a "Magnus" and "Maximus" unwieldy animals fed at enormous expense.

The bulls and bull calves were more numerous and finer, in all respects, than in former shows. They were from all parts of the country within reach of this exhibition.

The report of the hon. Mr. Welles will shew, that in the department of cows, heifers, and small stock, the show was superior to that of former years.

We have taken notice in the report, of the interest exhibited by the First Magistrate of the State in this show; an example worthy of his official and personal character. The great expense he must have incurred, the inconvenience of sending his domestics to such a distance, and the respect he thereby evinced for these exhibitions, and for the Society, whose show he so much enriched, require our most sincere thanks. His only object, we are authorized to state, was to enable the public to judge, whether our native stock had not been improved by the cross of the short horned breed of Great Britain. The fine ox, grass fed, half Denton, exhibited by Mr. White, of Boylston, showed their disposition to early maturity; while the cow exhibited by Governor Lincoln, at Worcester, proved them to be equal, at least, to our native cattle as milkers.

But were the proofs of the deep interest which the farmers feel in these shows confined to the exhibition of animals?

Take the working cattle and the ploughing match as test. When we first began, we could not fill our eight lots in the ploughing match, without the aid of Mr. Parsons, Mr. Prince, Mr. Derby, and Mr. Quincy, who came forward and solely with the view of encouraging the show.

How stood the case in 1826? Twenty-five yokes of working cattle entered for the premium, from Sutton in the west, to Medford in the east. Ten withdrew, from perceiving the superiority of their rivals. Fifteen actually competed; and we are assured by Gen. Derby, the chairman, and his fellow practical farmers, that the improvement was a most decided one.

In the ploughing match we had no less than twenty ploughs actually employed, instead of eight, which constituted our whole number at the com-

mencement of this show, of which three at least were owned by the Trustees. These competitors this year, were from the counties of Norfolk, Middlesex, and Worcester, embracing a territory of sixty miles square. We congratulate the ancient county of Middlesex, and the patriotic town of Concord on their unexampled success. We know that the Judges were practical farmers, excellent farmers. The numbers of the lots only were given to them—the names of the competitors were not disclosed to them. We have understood that some dissatisfaction was expressed by the Sutton farmers, because they did not carry all the premiums; but they ought to know, that the Judges were not in any degree influenced by local prejudices. They had no nearer connection with the Concord farmers than those of Sutton.

The choice was, in truth, one of difficulty—the ploughing was, all of it, excellent. But as citizens, we must feel a pleasure in finding, and the disappointed candidates ought to share with us, that pleasure, that good husbandry is not confined to any one section of our country.

If further proof could be necessary to show the zeal, which our respectable farmers feel in these exhibitions, I would simply add, that the most respectable farmers in Roxbury have been constantly competitors; and that the hon. Mr. Fiske, of Waltham entered the lists, managed his own plough, and though not successful as a competitor, owing to the extra length of time he took, yet he showed his skill and his conviction of the utility of these trials, by his entering as a competitor. We hope we have shewn, that if these Exhibitions fail, it cannot be attributed to any defect of zeal in the agricultural interest.

No. 1.

The Committee appointed to award the premiums for fat oxen, bulls, and bull calves, feel it their duty to say, that the late Show was signally rich in the descriptions of stock which came under their cognizance. The fat cattle were very fine, (never finer at this Show, all things duly considered,) and it is a source of great pleasure to the Committee, that they are able to award the premiums to grass fed cattle only.

They award the first premium of twenty-five dollars, to H. Penniman, of New Braintree, for his grass fed ox, weighing 2398 lbs., 7 years old.

The second premium of twenty dollars, they award to Aaron White, of Boylston, for his grass fed ox, (half Denton,) weighing 2451 lbs., six years old.

The third premium of ten dollars, to H. Penniman, for his grass fed ox, weighing 2198 lbs., 7 years old.

The other oxen offered for this premium were very fine, as were the two oxen offered by Ward N. Boylston, Esq., for exhibition only.

The first premium for the best bull had been awarded by the majority of the Committee, to his excellency Gov. Lincoln, for his fine red bull of the short horned breed, sired by Denton, but the chairman having been informed by Gov. Lincoln that he had sent his stock with a view to exhibit the merit of the short horned breed, and without a wish to compete for the premium, the Committee at the request of the Chairman, and in compliance with the wishes of his excellency, proceeded to consider the merits of other bulls, and do award the first premium of thirty dollars to Mr. Boylston, of Princeton, son of Ward N. Boylston, Esq., for his small bull, 14 months old, of the Westminster breed, commonly, and we fear erroneously, called the Yorkshire breed. They are probably an accidental variety of our own native breed of Devonshire extraction. They have uniformly carried premiums, when exhibited. Their qualities are compactness, great tendency to fat, on the most profitable parts.

The second premium of twenty dollars for bulls, they award to the hon. John Welles,* for his Cœlebs Junior.

The third premium of ten dollars they award to Noah Johnson, of Medford, for a young bull & Cœlebs, originally bred by the hon. P. C. Brooks, though now owned by Mr. Johnson.

The first premium for bull calves, of fifteen dollars, they award to Ichabod Stow, of the town of Stow, for a most extraordinary calf of the native breed, above mentioned, the Westminster, whose weight, at six months, was 688 lbs., and weight too, which was placed on the most valuable points.

The second premium of ten dollars, to Levi Howes, of Franklin, for a bull calf, one quarter Holderness, whose general character he exhibited.

The third premium of five dollars, they awarded to Eliphalet Baker, of Dedham, for a native bull calf.

The Committee would remark, that the stock from crosses of the foreign breeds, were very fine, and justify the belief, that they will contribute essentially to the improvement of our native cattle. The fine bull from Denton, exhibited by Jonas Ball—the bull from Holderness, exhibited by Mr. Bur-nap—the excellent specimens from Denton, Cœlebs, and Admiral, exhibited by Mr. Prince, Mr. Welles, and Gov. Lincoln, all shew that we owe much of our improvement in horned cattle, to the foreign crosses; and in ten years, we are persuaded, that there will not be a dissenting voice on the subject.

Per order,

JOHN LOWELL, Chairman.

ADDRESS OF CUTHBERT POWEL, ESQ.

To the Agricultural Society of Loudon, Fauquier, Prince William, and Fairfax, at their annual Fair and Exhibition, held at Middleburgh on the 17th October, 1886.

Gentlemen of the Society,

The lapse of time has again brought round the period of our autumnal meeting, and we once more find ourselves assembled, to make exhibition of our improvements in the stock of domestic animals, in our household fabrics and agricultural implements, and to compare the evidences of our advancement in the skilful cultivation of the soil. How interesting the occasion, how important the object! What is there that can give more rational pleasure to the mind of any one, than the reflection, that by his own example, or by his excitement of others, he has been enabled in some degree, to extend the profits, to cheer the labours, and elevate the rank of that large portion of the human race, whose occupation it is to till the ground for the sustenance of the whole family of man? A portion of society which the progress of liberty and the general diffusion of knowledge, wherever found, have rescued from that state of degradation, to which they were once so extensively condemned, and which still unhappily prevails in many parts of the world.

In former times, the earth was cultivated by serfs and villeins, as the labourers were then called, (or by other terms equally expressive of their servile station,) and they were considered little better than the beasts of the plough. Now, villains are found at least as common in other occupations, and the labour of the hands in the cultivation of the soil is no longer degrading. Although I apprehend, gentlemen, that we cannot yet claim ourselves the merit of having contributed much to the advancement of our object, yet I trust that the preservation of our position will afford the greatest basis for our future success.

our common purpose. It is well that men having the same interests, should sometimes come together and commune with one another; in the days of prosperity we may thus communicate the best methods of extending and securing it, and in times of distress, be so enabled to devise the means of mitigation or relief; or at least, we may lessen by sympathy, those evils for which no remedy can be found. It is under this impression that I shall, in the execution of my present official duty, offer you some imperfect reflections upon the condition and prospects of the agricultural interests of our district of country.

In that portion of the United States devoted to the culture of grain, for some years past, all have felt the influence of the extreme depression of the farming interests, and year after year, we have been hoping, without any definite grounds on which to rest that hope, that some change would take place to improve our condition. Disappointment has hitherto awaited us, and the clouds which so long overshadowed our prospects, are, as yet, in no degree dispelled. We labour at the present moment, under the complicated evil of half crops and low prices, in the great staple of our agriculture. Our wheat and flour, for many years, owing to the commotions of Europe, found a constant demand in that quarter, and which was continued from the partial failure of their crops for some years after the restoration of peace. But for a considerable time past, that portion of the world has ceased to require supplies from us, whilst the home market, together with the limited demands of South America and the West Indies, have been insufficient to preserve us from the depression we have been made to experience. And here, it is natural and proper for us to reflect and inquire—have we rational grounds to expect relief from these difficulties, and from what quarter? The wants of Europe we cannot rely upon, they may, or they may not come to our aid, and it would be unwise to rest upon so precarious a contingency.

Will the home market, without further foreign demand, probably get better? This is an interesting question, not merely as a speculation on a matter involving our future interests, but on the solution of which should depend our entire continuance in our present pursuits, or our instant efforts to apply more profitably a portion of our land and labour to other objects, according to our local position and the nature of our soil. In forming an opinion upon this subject, we shall derive much aid from the reports of the treasury department exhibiting the exports of the United States since the establishment of the federal government. From these it appears that the wheat and flour sent abroad in the year 1790, were within a trifle of being equal to the exports of the same articles in 1824, whilst the export of Indian corn, within this period of 34 years, had actually fallen off one million, three hundred thousand bushels. In fact then, whilst the population of the United States had increased from four millions to eleven, an actual diminution of the export of grain had at the same time taken place, and this, notwithstanding the great extension of our cultivation. It is true, that subsequently to the year 1790, we witnessed a considerable increase of export, under the stimulus of high prices abroad, but from 1817 to 1825, within the period of eight years, the value of breadstuffs, annually exported, had fallen from 204 to 54 millions of dollars, a reduction resulting from the joint operation of the fall of the price of the article, and the increased consumption of it at home, leaving less in quantity to be sent abroad. An important inference from these facts is clearly deducible, namely, that the internal consumption of the country is so growing upon the supply, that we must every year become less and less dependent upon foreign demand for our market. A position which

last crop, a very abundant one, has found consumers (it is true, at a low price,) without aid from European demand, and with shipments to South America lighter than hitherto. This must be attributed, not solely to the general increase of our population, but to the greater relative increase of that portion of it engaged in pursuits, other than the cultivation of grain. Our growing cities, towns, and villages, our southern brethren cultivating more profitable staples, and augmenting their demands upon us for food, and the increase of the manufacturing population of the northern and eastern states, all combine to produce the effect we witness. The exorbitant bounty we are made by the U. States tariff to pay, for the promotion of American manufactures, must be acknowledged, brings in this way some return, however inadequate at present, for the high prices paid for it, and however slow in its operation. In one other mode also does it operate in a degree beneficially to the grain growing country. The demand for wool has increased, and although just now overstocked, must continue to increase, and so far as the lands, equally applicable to grain and grass, shall be devoted to sheep husbandry, so far will the competition be lessened, and the market relieved for those, who from locality or peculiarity of soil, may still give a preference to the cultivation of wheat. That this promises in time, an important diversion of land and labour, especially in situations more remote from market than ours, may be derived from the facts stated in the treasury report, shewing, that in the last fiscal year, the imports of raw wool from foreign countries amounted to more than half a million, and the foreign manufactures of wool to near eleven millions of dollars. As the population of our country increases too, (and how rapid is its increase!) less and less reliance will be had upon the wilderness for the rearing of stock, and more and more of the inclosed lands be given to that object; and in this will be found another operation favourable to the price of grain. How large a portion of a country may be advantageously devoted to pasturage, may be learned from the fact as mentioned by Sir John Sinclair, that of the 18 millions of acres in Scotland, 15 millions are employed in the maintenance of stock.

From these considerations, gentlemen, I have thought we might derive some consolation, and justify ourselves in the belief that we have seen our wheat market in its lowest state of depression, and that we have some reasonable grounds for the expectation of a moderate and stable improvement, which must progress under the operation of the causes alluded to, until the products of our land and labour shall be brought to an equality in point of profit, with those of other parts of our common country, and with the capital and labour employed in the other pursuits of life. If then, I have not been led, rather by my hopes than my reason, in the suggestions which I have offered, it would seem, I think, that in this district of country we are not called upon by circumstances to make any radical change in our agricultural staples; but relying still upon grain and pasturage, should give to each the relative portion of our grounds to which we may be admonished from time to time by the indications of the market.

Whilst we mainly rely, however, upon these, we are highly meritorious in such as may find it convenient, to make experiments upon other objects, as upon the vine and the silk-worm, to both of which there is no doubt of the fitness of our soil and climate. The extent to which the cultivation of wine and of silk may be carried in our country, if found profitable, is sufficiently guaranteed by the fact, that the value of foreign wines imported into the United States in the last year, was near two millions of dollars, quite half the value of our exports of breadstuffs. Whilst the imports of foreign silk

millions, or 50 per cent. beyond the value of all the breadstuffs shipped from the United States within the same period. If, then, we are not called upon by prudence to make any radical change in our agricultural staples, if no new roads to wealth as yet well defined, allure us to desert the beaten track, it only remains for us to secure our independence by a strict economy in our expenditures, and an increased production from improved cultivation. Are we in the way to the attainment of this desired improvement?

Whilst we have, as I think, some evidences of the advancement of the theory and practice of agriculture amongst us, we have all yet much to learn, and much to practice of what we know. It is greatly to be desired that we could have presented to our common view more frequently, the result of the most successful experiments made amongst us. Written communications descriptive of such, would be the most valuable contributions that could be made to the society, and to this useful service I earnestly invite your attention.

There is one thing we should all bear in mind, that in these times no man can afford to farm badly. The best management is necessary to success; nor should any landholder content himself with a system which does not embrace within its practice, not only the means for present production, but those also which may be efficient to secure progressive permanent improvement to the soil itself, until it shall have attained the desired extent of fertility. For the accomplishment of this desirable object, I can only remind you, that the preservation and application of barn-yard manure, and the turning under of green crops, must be our main reliance; and I consider the increasing attention to those means, as the strongest indication of our agricultural improvement.

And after all, gentlemen, with whatever aid we may derive from science, the life of the husbandman is a life of labour, and we must be content to take it as such, with the reflection, that it is a useful, healthful, honest labour. It is not exactly with us as with our first parents, as described by Milton:

"They sat them down, after no more toil,
Of the sweet gardening labour than sufficed
To recommend cool zephyr, and made ease
More easy."

We must take a little more of the toil, and less of the zephyr. The earth is no longer a paradise, nor man the innocent and happy tenant; but we are yet taught what we should all remember, that whatever approximation we are to make to the enjoyment of Eden, is to be attained by the diligent cultivation of our field, of our mental faculties, and of the virtues of the heart. If by these we cannot boast a "paradise regained," we shall at least be secure of our fair portion of that bliss, which is afforded by the world in its present condition.

[Genius of Liberty.]

INTERNAL IMPROVEMENT.

Harrisburg, Oct 27, 1826.

The Susquehanna commissioners arrived at this place the day before yesterday, on their passage to the Maryland line, having completed the surveys of the river from the New York line to this town. They had erected, in Bradford county, a flat bottomed boat, on which they have placed a building, measuring thirty feet in length, and fifteen in width, in which they cook and eat their victuals, stow away their baggage, take their sleep, and shelter themselves in stormy weather. When they are unable to employ the level, the engineers, Mr. Trezignulney and Hines, occupy a portion of the room as an office, in which they make their calculations, &c. It draws but about two inches of water, and is really a comfortable conveyance, and is a very great saving to

the state, compared with wagons or carriages to carry the commissioners, engineers, hands, tools, &c. The boat is designated by the name of "General Jackson," in large capitals, painted on the side.

The whole of the survey of the Susquehanna, within our state, will be completed by the meeting of the legislature, when a report of their proceedings will be made by Messrs. Hyde, M'Means, and Wilson.

TONNAGE OF LAKE CHAMPLAIN.

The American vessels employed in navigating Lake Champlain, are no less than 215—tonnage, 12,000. And it is stated, that previous to the opening of the Northern Canal, there were but about 20 vessels on that lake. The tolls at Whitehall, for this season, already amount to about \$40,000.

LADIES' DEPARTMENT.

HYACINTHS.

(Concluded from page 270.)

A bed of hyacinths never requires to be watered at any period; the rains that happen after planting are generally more than sufficient, both for the roots and the bloom; and after the bloom is over, they are rather prejudicial than otherwise, except when very moderate.

Although covering in the manner described, presents and exhibits the bloom to the greatest advantage, yet it evidently has a tendency to weaken and injure the bulbs, and ought not, therefore, to be continued more than two or three weeks at most; but as soon as the general bloom declines, the bed should be immediately exposed to the open air, and the mats and hoops should be replaced, as before, to keep off heavy rains.

It is the practice in Holland to take up the bulbs about three weeks or a month after bloom, in the following manner: as soon as the plants begin to put on a yellowish decayed appearance, they take up the roots and cut off the stem and foliage close to, or within half an inch of the bulb, but leave the fibres, &c. attached to it; they then place the bulbs again on the same bed sideways, with their points towards the north, and cover them about half an inch deep, with dry earth or sand, in the form of a ridge, or little cone, over each: in this state they remain about three weeks longer, and dry or ripen gradually; during which, as much air is admitted as possible, but the bed is preserved from heavy rains, and too hot a sun: at the expiration of this period the bulbs are taken up, and their fibres, which are become nearly dry, gently rubbed off; they are then placed in a dry room for a few days, and are afterwards cleaned from any soil that adheres to them, their loose skins taken off, with such offsets as may be easily separated.

When this dressing is finished, the bulbs are wrapped up in separate pieces of paper, or buried in dry sand, where they remain till the return of the season for planting.

Another, and less troublesome mode of treatment after bloom, though perhaps more hazardous, is to keep the bed airy, and rather dry, till the stems and foliage appear nearly dried up or consumed; this will seldom happen to be the case in less than two months; the bulbs are then to be taken up, cleaned from the fibres, soil, &c., and preserved in sand or papers as before directed.

Offsets may be planted a few days earlier than the large roots, in an open part of the garden, in rows about two inches deep, upon a bed raised six or eight inches above the common level, consisting of a sandy soil, comminuted, or pulverized, eighteen inches deep; the surface of the bed should be made rather convex or rounding, so as to throw off heavy

rains; no further attention is necessary, except to stir the surface of the bed occasionally, keep it free from weeds, and preserve it from very severe frost. The proper time to take up, &c. is already pointed out, being the same as for large roots.

Offsets, if preserved in health, will bloom weakly the second year; but by the third, tolerably strong, and may afterwards be placed on the best bed.

Such roots as have attained the age of four or five years, bloom stronger in this country than any other; they afterwards gradually decline, either by dividing into offsets, or diminishing in size and strength; but in Holland, owing to the peculiar circumstances of the soil, climate, situation, &c., the same bulb has been known to produce bloom twelve or thirteen times, nor is it ever known to die merely with age.

Hyacinths are subject to various diseases, arising from different causes; that distemper, commonly known by the appellation of the ring sickness, is of all others the most dangerous, and most difficult to cure; in short, the only effectual remedy is to cut out the diseased part, till no brownness, yellowness, or other symptom of distemper remains. The sound part will survive the operation, if it consist of no more than the outside tunick of the bulb, without any heart; but it will, in such case, only be able to produce offsets, and will never recover itself, so as to flower again; as soon as the operation is performed, the wounded part should be exposed to the sun till it becomes dry, to prevent mouldiness, and it will be best to replant it in some dry situation soon after.

The hyacinth delights in a sandy soil and saline atmosphere; of consequence it succeeds best on the sea coast, or in situations very near to the sea.* In more inland parts, it will generally be found necessary to procure an annual reinforcement of fresh imported bulbs, in order to make good, or supply the deficiencies arising from the loss, or impaired health and strength of many of those that have bloomed on the best bed the preceding spring. Those who are well acquainted with the hyacinth, always allow about one bulb in twelve to fail, notwithstanding no visible blemish or decay is discernible at the time of planting; such generally have a *corps de reserve*, in narrow deep pots, which, at the commencement of bloom, they plunge or sink into the bed, wherever a vacancy, or weak, sickly plant makes its appearance; by which means the uniformity and regularity of the bed is preserved, without any visible defect or alteration.

Single hyacinths are held in less estimation than full or double ones; their colours are, however, equally good, if not superior, and their bells, though small, are more numerous; they are more hardy, and may be planted a week or two before the double sorts, by which means they will bloom two or three weeks earlier than the latter, with the same kind of management.

The whites and blues amongst these single sorts are possessed of better properties than the reds; it is, therefore, advisable to have a greater proportion of them in a collection.

Single hyacinths produce seed, which is very rare—

* The Hon. and Rev. William Herbert, in a valuable paper on the culture of a hyacinth, published in the Horticultural Society's Transactions, vol. iv. considers that every nurseryman, in the neighbourhood of London, by carefully imitating the Dutch compost, as described by St. Simon, (see note to page 269, *Am. Farmer*), may produce hyacinth bulbs equal, if not superior, to those imported from Holland; though, perhaps, with greater loss from disease, owing to the difficulty of procuring neat's dung from stall-fed cattle, and quite free from straw. Hyacinths and the harder ripe bulbs, he thinks, might be cultivated alternately; and pure sand, placed in contact with the bulbs, might preserve the bulbs from the attacks of the insects.—*Hort. Trans.* vol. iv. p. 169.

ly to be procured from double sorts, and the following is the most approved method of raising and cultivating it; but it is scarcely worth attempting in this country, as its progress is so slow, and success in ultimately obtaining any valuable flowers is so extremely precarious.

The seed should be saved from such sorts as have strong and straight stems, and a regular well-formed pyramid of bells, not perfectly single, but rather semi-double. It should not be gathered till it has become perfectly black and ripe, at which time the pericarpium will appear yellow on the outside, and will begin to open. The stem, with which the seed is connected, is then to be cut off, and placed in a dry, airy, cool situation, where it may remain undisturbed till the time of sowing, which is the latter end of October, or beginning of March: it should then be sown about half an inch below the surface of the soil, in a deep box filled with good sound garden mould mixed with sand, or the hyacinth compost, which should be afterwards placed in a warm situation during winter. It will never require to be watered, or have any other attention paid to it, than to keep it free from weeds and frost, till it has remained in this state two years; it must then, on the approach of winter, have an additional stratum of the compost placed upon it, about half an inch thick; and at the third year, in the month of July, the roots may be taken up, dried, and treated in the same manner as described for large bulbs or offsets; some of the roots will flower the fourth year, one half of them will at the fifth, but, by the sixth year, every healthy root will exhibit its bloom, and then the hopes and expectations of the cultivator will be realized or disappointed. He may think himself fortunate, if one half of the plants that first appeared, are in existence at this period; and if he can at last find one flower in five hundred deserving a name or place in a curious collection, he may rest perfectly content, and be assured that he has fared as well as could reasonably be expected, and better than many who have bestowed equal attention on the subject.

A DESCRIPTION OF THE PROPERTIES OF A FINE DOUBLE HYACINTH.

The stem should be strong, tall, and erect, supporting numerous large bells, each suspended by a short and strong peduncle, or foot-stalk, in a horizontal position, so that the whole may have a compact pyramidal form, with the crown, or uppermost bell perfectly erect.

The bells should be large, and perfectly double, i. e. well filled with broad and bold petals, appearing to the eye rather convex, than flat or hollow: they should occupy about one half the length of the stem.

The colours should be clear and bright, whether plain red, white, or blue, or variously intermixed and diversified in the eye; the latter, it must be confessed, gives additional lustre and elegance to this beautiful flower.

Strong bright colours are, in general, preferred to such as are pale; there are, however, many rose-coloured, pure white, and light blue hyacinths, in high estimation.

Some sorts consist of petals of different colours, such as light reds, with deep red eyes; whites, with rosy, blue, purple, or yellow eyes; light blues, with deep blue or purple eyes; and yellow, with purple in the eye, &c.; others again have their petals striped, or marked down the centre, with a paler or deeper colour, which has a pleasing effect.

It sometimes happens, and with some sorts more frequently than others, that two stems are produced from the same root, one is generally considerably taller and stronger than the other; when this is the case, the weaker may be cut off near the ground, soon after it makes its appearance, or suffered to

bloom, and its bells be intermixed with the lower ones of the taller stem, so dexterously as to appear like one regular pyramid of bells. [*Flor. Dir'y.*]

FLOWER POTS FOR ROOMS.

At a late meeting of the Horticultural Society, on the 6th inst, a paper was read upon the manner of cultivating plants in pots filled with moss only, and not mould. It appeared that the method to be pursued, was to fill a pot with coarse moss, of any kind, in the same manner as it would be filled with earth, and to place a cutting or a seed in this moss. The secretary was understood to say, that he was well acquainted with the practice, and that it succeeded admirably, especially with plants destined to ornament a drawing-room. In such a situation, plants grown in moss, were stated to thrive better than if they were in garden mould, and to possess the very great advantage of not causing dirt by the earth not washing out of them when watered. For transportation, plants rooted in moss were said to be better adapted, on account of their lightness. In short, the method was declared to be in all ways excellent. The explanation of the practice seems to be this: that moss rammed into a pot, and subjected to continual watering, is soon brought into a state of decomposition, when it becomes a pure vegetable mould; and it is well known that pure vegetable mould is the most proper of all materials for the growth of almost all kinds of plants. The moss would also not contain more moisture than precisely the quantity best adapted to the absorbent powers of the root—a condition which can scarcely be obtained with any certainty by the use of earth.

[*London paper.*]

SAD RECOLLECTIONS.

(From the N. Y. Gazette and Athenæum.)

Say, is the form we lov'd so well
Pent in the narrow lonely cell,

To worms a prey?
Has death, so cruel and so cold,
Hidden within his icy fold

That heart? oh say.

I never can forget that form,
That feeling heart, so kind, so warm,
And so sincere.

That cheerful smile which did impart
Its mildest influence on my heart—
That gen'rous tear.

I saw disease with loathsome smile,
Hovering o'er her for awhile.

When pale decay,
With poison'd arrows, sent by death,
Assail'd her, and her vital breath
Fled fast away.

I saw her on the bed of death—
I heard her last, her dying breath—
I clos'd her eye.

I saw her feeble pulse decay,
I watch'd it till it ceas'd, for aye—
Oh! agony!

I laid my head upon her breast—
Her clay-cold lips in anguish prest:
I wept aloud.

But keenest grief could not avail,
To warm her cheek so cold, so pale.
And oh, that shroud!

I saw them place her on the bier—
Then flow'd the sorrow-starting tear
From every eye.

I heard the sullen church yard bell
Tolling its saddest funeral knell
In yon bright sky.

And then my callous heart did ache;
In agony did almost break,

For that lone one
Who own'd affliction's chast'ning rod,
And in his grief exclaim'd, "My God!
Thy will be done."

Her children with their sire so sad,
In death's own sable vestments clad,
Were lowly bow'd;
I heard their agonizing cries,
Their mournful heart-wrung sobs and sighs.
Frequent and loud.

Her aged father felt the stroke—
No tear he shed, no word he spoke,
But deeply griev'd.
He bade affection's voice be still,
And bowing to his Maker's will,
In him believ'd.

Her num'rous friends dropp'd o'er her bier
The farewell tribute of a tear,
Then turn'd away.

And now her beauteous corse is laid
Beneath the weeping-willow shade,
In house of clay.

The scene is past! and oft alone,
I love to gaze upon the stone
That marks her bed.
I love to gaze upon that tree,
Its branches wave so mournfully
Over her head.

And oft at midnight's silent hour,
Fond memory exerts her power,
While others sleep.
And is there not a "joy in grief,"
When tears afford some small relief?
Yes, let me weep.

But while her corse, within the tomb,
Shrouded in solitary gloom,
Fast mould'ring lies.
Her spotless spirit lives in bliss.
Thron'd with its God, and happiness,
Beyond the skies.

CLEONE.

SPORTING OLIO.



TATTERSALL'S.

(From the Farmer's Chronicle, Eng.)

Thursday.—The betting to-day was very slack, although several of the leaders of the betters were in attendance. The horses chiefly noticed, were *Monarch*, *Bolivar*, and *Parasol*. The former is still advancing, while the other two decline. No alteration in the odds on the St. Leger.

DERBY—6 to 1 against *Monarch*; 10 to 1 against *Bolivar*; 16 to 1 agst. *Cedric*; 20 to 1 agst. *Zuleika*; 25 to 1 agst. *The General*; 18 to 1 agst. *Tredrille*; 20 to 1 agst. *Twatty*; 25 to 1 agst. *Canvass*; 20 to 1 agst. *Sophist*; 20 to 1 agst. *Advance*; 20 to 1 agst. *Grammane*; 25 to 1 agst. *Pranks*.

OAKS.—7 to 1 against *Pawn*; 9 to 1 agst. *Henry*; 9 to 1 agst. *Moses*; 12 to 1 agst. *Parasol*; 14 to 1 agst. *Bo-Peep*; 15 to 1 agst. *Elizabeth*; 12 to 1 agst. *Mignonette*; 15 to 1 agst. *Quadrille*.

TROTTING MATCHES.

(From the Farmer's Chronicle, Eng.)

The Melton Nowbray horse, *Forrester*, lost his match of two miles for 500 sovereigns a few days

ago, on the flat approaching Nottingham. The task was to trot the two miles in three minutes and four seconds, but the time was out when the horse was fifty yards from home.

Tuesday, two gentlemen of Glasgow laid a considerable bet to trot their own horses a distance of nine miles. One of the riders weighed 17 stone, the other only 11. The lightest rider, however, on the previous evening, judged it proper to decline the trial, and forfeited stakes. The other gentleman was on the ground at the appointed time, and was backed to trot the nine miles in 36 minutes. This he accomplished in fine style (his mare never once breaking into a gallop,) in 33 minutes, leaving three to spare. About 30 horses started, same time, at full gallop; but only four were able to keep up with him the whole distance. The umpire at the race bought the mare next morning for 80 guineas, and declares that he would not now take 100 guineas for her.

On the 10th of December, a bay horse, the property of a gentleman in the borough, started to trot, in harness, twelve miles in 50 minutes, for 200 sovereigns, and won cleverly by a minute and a half. The American roan started on the same ground, to do one mile in three minutes and six seconds, upon the trot, for 50 sovereigns, and won, with two seconds to spare. [*Annals of Sporting.*]

CHARIOTEERING.—Captain Hubert Webster, who made a match last week for 200 sovs. to drive a pair of horses (not confined to a trot,) in a phaeton, from Barham Downs to the Borough Stones, computed 56 miles, in six hours, started on the task on Tuesday morning. He performed ten miles in the first hour, and ten and a half in the second, when the bets were drawn, and the horses well rubbed down: this time included half the distance was accomplished in seven minutes less than half the time. The horses performed eleven miles in the third hour, and were again fed eleven miles from home. The match was won very easily with more than eight minutes to spare; and our informant states, that the horses in a few hours could have gone back again in the time. [*Farmer's Chronicle.*]

RACE AGAINST A COACH.—A groom, of the name of Edwards, was matched to run, on Saturday morning, Nov 8, eighteen miles in less time than the Bath Regulator coach. The coach performed the eighteen miles, changing twice, in two hours and eight minutes. The pedestrian did his task with great ease, in five minutes less than two hours. [*An. of Sporting.*]

PEDESTRIANISM.—Walter Woods, who lately performed two miles in ten minutes, over a part of Epsom race course, started, on Tuesday, December 9, at four o'clock, to go on foot from London Bridge to Rye, in Sussex, and back, in forty-eight hours, the distance 126 miles, over a hilly country. The pedestrian is five feet in height, and weighs nine stone. His first start was to Seven Oaks-Common, 24 miles, in four hours, where he ate a boiled fowl, and rested an hour. He dined off mutton chops at Hawkhurst, Kent, (46 miles,) at three o'clock; laid down two hours, and resumed his journey leisurely. He rested at Rye, at nine in the evening, and returned back to Sandhurst, where he slept four hours, and left himself the remaining fifty miles to do in sixteen hours. He reached Seven Oaks, at eight o'clock, on the Wednesday evening, and finally won the match, without much fatigue, with twenty minutes to spare. The match is considered equal to 75 miles per day on picked ground. It was for 100 sovereigns. [*Ib.*]

Mr. G. West's match to perform 600 miles in ten days, over four miles of ground, at Rippon, was decided at nine o'clock on Saturday evening. He started on Thursday se'nnight, and did each day as follows: 1st day, 65 miles; 2d, 62; 3d, 59; 4th, 58; 5th, 64; 6th, 62; 7th, 56; 8th, 55; 9th, 57; 10th, 63—total, 601. The match was accomplished with little fatigue, except on the 7th and 8th days, after which the pedestrian recovered of blisters on the feet, and did the last day's work in eighteen hours. He would have been beaten had his engagement been to do sixty miles on each day. [*Ib.*]

IRISH WARRANTY.—A moral distinction. An Irish horse dealer sold a fine blood mare, warranting her without fault. The purchaser, on her being sent home, found, upon examination, that the sight of one of her eyes was quite gone. Next day he waited upon the dealer, desired that she might be taken back, and the purchase money returned, reminding the seller that he had declared the mare to be without fault. "To be sure, my dear, I did," replied Paddy; "blindness is not the poor creature's fault, but her misfortune." [*Ib.*]

A horse, late in the possession of Mr. Spurr, of the Ship inn, Crediton, Devon, in his service eleven years and a half, which travelled post from this town to Hatherleigh, and which was lately sent to the kennel, has, upon a rough calculation, gone upwards of 74,000 miles in the above space of time. This instance, alone, of the strength and endurance of that noble animal, is truly wonderful. [*Ib.*]

HUNTING SONG.

'Tis true, when first the rosy dawn
Leads on the sprightly day,
Along the copse or cross the lawn,
We trace the devious way;
From ev'ry hill and grove around,
By sportive echoes borne,
We catch the soul enlivening sound,
The madness of the morn.

Now o'er the crag, abrupt and steep,
The mettled coursers strain,
Now brave the rough descent, and sweep
Impetuous to the plain;
Now leap the mound, and urg'd amain,
In speed outstrip the wind,
While panting care pursues in vain,
And sorrow lags behind.

When evening sheds the pleasing gloom,
To calmer scenes restor'd,
We greet with songs the genial room,
And hail the festive board:
By wine, and wine's free joys engross'd,
The happy minutes roll,
Here love and wit inspire the toast,
And friendship guards the bowl.

MISCELLANEOUS.

PUNCTUATION.

The importance of a misplaced comma.—Amazing as it may seem, it is certainly fact, that the unfortunate King Edward II. lost his life by means of a misplaced comma; for his cruel Queen, with whom he was at variance, sent to the keeper of the prison, where he was confined, the following lines:

"To shed King Edward's blood
Refuse to fear, I count it good"

Had the comma been placed after the word refuse, thus—

"To shed King Edward's blood
Refuse,"

the sense would have implied that the keeper was commanded not to hurt the King, and the remainder of the line—

"To fear, I count it good,"

would have signified that it was counted good not to spill his blood: but the comma being wickedly placed after the word fear, thus—

"To shed King Edward's blood

Refuse to fear,"

the murderer seemed commanded, together with a kind of indemnification to the keeper; nay, after this mode of pointing, the remainder of the lines seem to deem the action meritorious:

"I count it good"

According to the punctuation, the keeper took the lines in the worst sense, and the King lost his life on the occasion.

SWIMMING.

The New London Gazette mentions, that a few days since, Capt. P Rogers, in the sloop Swift, off Oak Neck, bound to New York, three miles from the land, at 8 o'clock in the evening, discovered an ox, hove to, and the ox swam alongside the vessel. Tackles, &c., were rigged for the purpose of hoisting him on the deck, in doing which his neck was broke. He proved to be very fat. Capt. R on arriving in this city, met the owner in the market, who informed him that the ox had jumped out of a market boat, at 8 o'clock the evening before. He had consequently been, when taken up, not less than 24 hours in the water, and was apparently in full strength at the time.

LOVE APPLES.

An ingenious mode has lately been discovered in Spain of preserving for an indefinite time, the perfume and other qualities of the tomato, and of conveying it to great distances in a small compass. This process consists in pulverizing the fruit after having dried it in the sun, and in an oven. To preserve the powder, all that is necessary is not to expose it to the air.

MAMMOTH POTATO.—A sweet potato was lately dug from the garden of Mr. Wm. Mackey, of Talbot county, measuring in length 11½ inches, in circumference 15 inches, and weighing 3½ pounds!

RECIPES.

BREWING.

The London Mechanic's Magazine gives the following instructions for brewing "on a small scale."

"The art of brewing is exactly similar to the process of making tea. Put a handful of malt into a tea pot; then fill it with water, the first time rather under boiling heat. After it has stood some time, pour off the liquor, just as you would tea, and fill up the pot again with boiling water; in a similar manner pour that off, and so go on filling up and pouring off, till the malt in the pot is tasteless, which will be the case when all the virtue is extracted. The liquor, or malt tea, thus extracted, must then be boiled with a few hops in it; and when it becomes cool enough, that is, about blood heat, add a little yeast to ferment it, and the thing is done. This is the whole art and process of brewing: and to brew a larger quantity, requires just the same mode of proceeding as it would to make a tea breakfast for a regiment of soldiers. A peck of malt and four ounces of hops will produce ten quarts of ale, better than any that can be purchased in London; and for which purpose a tea-kettle and two pan mugs are sufficient apparatus."

FOR DIPPING BLACK SILKS WHEN THEY APPEAR RUDDY, OR THE COLOUR LOOKS FADED.

For a silk dress, your own discretion must be used, whether the silk can be roused, or whether it requires to be re-dyed. Should it require re-dyeing, this is done as follows: for a gown, boil two ounces of logwood; when boiled half an hour put in your silk, and simmer it half an hour, then take it out, and add a piece of blue vitriol as big as a pea, and a piece of green copperas as big as the half of a horse bean; when these are dissolved, cool down the copper with cold water, and put in your silk, and simmer half an hour, handling it over with a stick; wash and dry in the air, and finish as directed in page 207. If only wanting to be roused, pass it through spring water, in which is half a teaspoonful of oil of vitriol. Handle in this five minutes, then rinse in cold water, and finish as above.

OF SILKS STAINED BY CORROSIVE OR SHARP LIQUORS.

We often find that lemon juice, vinegar, oil of vitriol, and other sharp corrosives, stain dyed garments. Sometimes by adding a little pearl ash to a soap lather, and passing the silks through these, the faded colour will be restored. Pearl ash and warm water will sometimes do alone, but it is the most efficacious method to use the soap lather and pearl-ash together.

TO DRY-CLEAN CLOTHES OF ANY COLOUR.

First, examining where the spots of grease are, dip your brush in warm gall, and strike over the greasy places, when the grease will immediately disappear; rinse it off in cold water; dry by the fire, then take sand, such as is bought at the oil shops, and laying your coat flat on a table, strew this sand over it, and knocking your brush on it, beat the sand into the cloth: the sand should be a little damp; then brush it out with a hard brush, and it will bring out all the filth with it. This does also for coach linings and gentlemen's clothes, &c. In the summer time, when dust gets into clothes, &c. after they have been well shaken and brushed again, pour a drop or two of the oil of olives into the palm of your hand, rub this over your soft brush, strike your coat over with it, and this will brighten the colour, if either blue, black, or green.

REMARKS ON SCOURING WOOLLENS.

It often happens that woollens are dyed with a false dye, which is generally more brilliant than a fast or good dye. When this happens to be the case, especially in very fine colours, as purples, greens, maroons, &c., instead of spotting the cloths with soap in the solid state, other means must be used. A thin solution of soap should be made, and the brush dipped in, and then applied to the dirty places; and in case it is a false green, after it has been treated the same as all light colours, a pan should be filled half full of spring water, and the coat, &c. having been previously well rinsed in two waters at least, a tea spoonful or rather more of the best oil of vitriol, should be poured into this vessel of spring water, and the coat put in and handled a minute or two, which will revive the colours, if a chemie green; and if not, it will not hurt any fast green.

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 17, 1826.

Upon looking again at Mr. Powel's Address, we have concluded to publish it in *extenso*, instead of making extracts, as we had proposed.

To CORRESPONDENTS.—The Editor has been absent since the last paper was issued, until this number was put to press.

INDIAN QUEEN HOTEL, AND BALTIMORE HOUSE.

This celebrated and extensive Hotel, containing about 100 feet on Market or Baltimore-street, and 223 feet on Hanover-street, and formerly occupied, successively, by Messrs. Gadsby and Barnum, has been recently highly improved and newly furnished in the first style. The public rooms are splendidly fitted up; the chambers with new, neat and suitable furniture. The parlours on Hanover-street, and on Market-street for families (private entrance on Market-street, distinct from the hotel,) are elegantly furnished, and the chambers attached to them for privacy, convenience and furniture, equal to any public house. The undersigned is fully justified by public opinion in stating, that the house and premises, in appearance, comfort, arrangement and style, is far beyond what it ever was.

The other accommodations, comforts, and luxuries of life, essential to the convenience and full enjoyment of the traveler, such as a clean house and chambers, attentive servants, and all that is embraced in a good table, &c. the undersigned flatters himself, as he has not hitherto been "found wanting," in any of these important requisites, in his former establishment in this city, so he hopes by his efforts, correspondent to his other exertions, to meet public expectation and the partiality of his patrons in these, and in all other respects. The Stables and Carriage Houses are extensive and conveniently situated, on an adjoining lot; attentive, experienced and trusty Hostlers are employed. The Western, Southern, York and Philadelphia Stages, are permanently fixed to run from the old established Stage Office attached to this Hotel. An attentive and trusty watchman is employed, during the night, to guard the interior of the house. One of the bar-keepers will be in readiness to attend to gentlemen arriving in the Steam boat, and facilitate their departure at any hour when required. The extraordinary exertions the undersigned has made to merit public patronage, and to meet the views of his friends and the friends and patrons of the house; his determination to keep the establishment equal to any in the Union in all respects; his known moderate charges, combined with the fine public location of the house, situated on two beautiful and spacious streets, convenient to every part of the city, wharves, steam boats, and in the very centre of active business, and also of the enlivening, gay crowds which throng and pass in review the great thoroughfare of the city, (Market-street,) induce him to hope for a continuance of the very flattering testimony of public favour, which he has already been honoured with, under circumstances (while cleaning, painting, altering, &c.) which demand the most grateful acknowledgements of the public's most obedient servant,
Nov. 17. G. BELTZHOVER, Ag't.

FOR SALE,

A beautiful young STALLION, four years old last spring, upwards of fifteen hands high, and of beautiful symmetry and fine action for the saddle and harness. He is by Governor Wright's Silver Heels, out of an Arabian Dey of Algiers' mare, and is considered full bred, or so nearly so, as to answer for a stock horse for any purpose but that of the turf, never having been trained.

He is of a beautiful pale cream colour, with legs, mane and tail a little grey; and to save trouble, he will be delivered in Baltimore at \$500, and warranted sound, healthy and vigorous, and of as perfect symmetry as any horse that can be found in the city. He is a splendid military parade horse. Reference, by permission, may be made to the Editor of this paper.

Nov. 6th, 1826.

CONTENTS OF THIS NUMBER.

Memoir on the expediency and practicability of improving and creating Home-Markets for Agricultural productions and Raw Materials, by George Tibbits, concluded—Brighton Cattle Show Reports, No. 1, on fat cattle, bulls, and bull calves—Address of Cuthbert Powel, Esq., to the Agricultural Society of Loudon, Fauquier, Prince William, and Fairfax—Improvement of the Susquehanna—Tonnage on Lake Champlain—On the culture of Hyacinths, concluded—Flower Pots for rooms—Poetry, Sad Recollections—Sporting Items from English papers—Hunting Song—Punctuation—Swimming—Love Apples—Mammoth Potato—Brewing—Recipes for Dyeing and cleaning cloths—Editorial.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00	8 50		
BACON, and Hams,	lb.	6	10	9	12
BEESE-WAX, Am. yellow,	—	29	30		50
COFFEE, Java,	—	16½	17½	20	22
Havana,	—	14	17		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	28	30		
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	11	12		14
CHEESE,	—	8½	10	12	15
FEATHERS, Live, . . .	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed,	—	6 00			
FLAXSEED,	bush	80			
FLOUR, Superfine, city,	bbl.	5 12		5 25	6 25
Fine,	—	4 75			
Susquehanna, superfi.	—				none
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	52	55		
white	—	52	55		
Wheat, Family Flour,	—	1 12½			
do. Lawler, & Red, new	—	1 00	1 02		
do. Red, Susque. . .	—	1 00	1 03		
Rye,	—	75			
Barley,	—	1 12½	1 25		
Clover Seed, Red . .	bush	4 50		5 00	
Ruta Baga Seed, . .	lb.	87	1 00		
Orchard Grass Seed,	bush	3 00		3 50	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	4 00		4 60	
Oats,	—	48	50		
Beans, White, . . .	—	1 25	1 50	1 87	
HEMP, Russia, clean,	ton	205	215		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	25			
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	6½			
Bar	—	7½			
LEATHER, Soal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	46	50	62½	75
Havana, 1st qual. . .	—	30	32	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar,	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	27	30	40	
Spermaceti, winter .	—	80		85	
PORK, Baltimore Mess,	bbl	11 00			
do. Prime,	—	8 00	8 50		
PLASTER, cargo price,	ton.	3 50	3 62½		
ground,	bbl.	1 50			
RICE, fresh,	lb.	3½		5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	8	10	12
WHISKEY, 1st proof, .	gal.	35	37	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	29	30	50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	10 50	10 75		
Louisiana,	—	9 25	10 00	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	16		25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	48		75	
SHOT, Balt. all sizes, .	cib.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Claret,	doz.	4	8	5 00	8 00
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bld	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinnners' or Pulled,	—	20	25		

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AGRICULTURE.

BRIGHTON CATTLE SHOW REPORTS.

No. II.

The Committee on all other Stock than fat cattle, consisting of Messrs. John Welles of Boston, Joseph Harrington of Roxbury, and Thomas Williams of Noddle's Island—REPORT,

That it was a source of high gratification to find at the Exhibition of the Massachusetts Agricultural Society of this year, a general and marked improvement in the cattle, presented both for premium and exhibition. They were of such appearance as indicated a judicious selection, with a careful attention and management.

The munificence of the State for the encouragement of the agricultural interests can, we are confident, be in no way more acceptably requited than in results conducive to the public good.

Certainly, that the Society, in their labours and the distribution of their funds, wish no higher reward than is offered in the appearance of improvement which the face of the country may present. But although much has been done, there is yet more due to give a full effect to our exhibitions: zeal must be quickened, competition excited, and a greater display made of our flocks, our herds, and our products. Can our farmers wish to hold back the recompense they receive from a soil their industry has made fertile and productive?

Much is in their power to make our Show highly interesting, and with the important relation it has to industry and the great staples of New England, we cannot believe they will be urged to exertion and co-operation in vain.

It was amongst the encouraging circumstances of the day, that the milch cows were of better appearance and more value than heretofore. It is highly important to the objects this society has in view to find that our stock, both from the imported breeds as well as from judicious selections from our native cattle, are every year affording proof of such improvement in form and productiveness, as cannot fail to gratify those who look with solicitude to either mode, as the most beneficial to the country.

Milch Cows.

The Committee award the first premium for the best milch cow, to Colonel Jacob W. Watson, of Princeton, \$30.

This was of our native stock—a fine formed animal, 3 years old, and of valuable properties. Her productiveness was strongly supported by her owner, which her appearance fully confirmed. At the age of 25 months she produced her first calf, and for some time after she gave sixteen quarts of milk a day. This year, four weeks after calving, she gave nineteen quarts of milk a day.*

The second premium they award to Mr. Daniel Weston, of Lincoln, \$20.

This was of native stock—a well proportioned and very productive animal. She calved in April last, and in one week in this month (October,) 11½ lbs. of butter were made from her milk.

The third premium they award to Mrs. S. Cushman, of Needham, \$15.

This was also of native stock. It was certified that from the milk she had given in seventeen weeks preceding the day of exhibition, more than 12 lbs. of butter a week were made. Her pasture was ordinary, with two or three quarts of meal a day.

There were several other excellent cows exhibited, viz: a fine cow of the Rev. Samuel C Ripley. From this cow's milk over 8 lbs. a week for six

months were made. Her keep was however better than common, being 3 quarts of meal and 4 peck a day of carrots.

Doctor Benj. Shurtleff had also a young cow, half Galloway half Cœlebs, of great milch properties and promise.

Mr. H. Adams, jr., exhibited an excellent cow, and there were several others which added much to the show, as evincing a general and gratifying improvement.

Milch Heifers.

The Committee award for the best milch heifer to Captain Wm. Prentiss, of Boston, the first premium, \$15.

This was a twin heifer of the Cœlebs breed. They both received the premium of the society last year as heifers not in milk. Both were exhibited this year and are of excellent appearance. This distinction as a milch heifer was, it is believed, well merited in the opinion of observers.

The Committee award the second premium to Col. Jacob W. Watson, of Princeton, \$10.

This was a beautiful heifer from the celebrated bull Denton, imported by Mr. Williams, of Northboro', and much to be admired.

Heifers.

The Committee award for the best heifer, not having had a calf, to his excellency Levi Lincoln, of Worcester, the first premium, \$12.

This was for a much admired red heifer, two years old, from his own improved stock crossed by Admiral.

The second premium they award to his excellency for a white heifer called the Lily, of distinguished form and promising appearance.

The Committee were informed, after they had finished the duties of their appointment, that his excellency had intended by the show of his fine stock, merely to give a variety to the exhibitions, which could not fail from so interesting a display. But his wishes were subsequently expressed with liberality to the committee, that the preceding premiums might be added to the funds of the Society for their future disposition.

The third premium they award to H. Allen, Esq. of Dover, \$8.

For a fine red heifer of native stock.

The fourth premium they award to Dr. Benjamin Shurtleff, of (Chelsea,) Boston, \$6.

For an excellent heifer from the imported bull Cœlebs, which might vie, in the judgment of many, with some of the preceding, and as to which the committee were at a loss.

There were a number of beautiful heifers for exhibition by Gov. Lincoln, and several other gentlemen, from the imported stock of Denton, Cœlebs, Admiral, &c.

Several of these, as well as of native stock, were offered for premium.

A heifer of Moses Richardson, 16 months old, was of good appearance, and weighed on the hoof 850 lbs. and much of the young stock, as the committee believe, afford good ground for prospective encouragement to our farmers at a future display.

The Committee recommend that there be paid to Mr. —, who occupied pen No. 68, \$5 for the exhibition of a cow with her 7 calves of fair and thrifty appearance, all brought in 34 months, viz: twins twice, and three at another time, an instance of fecundity of rare occurrence.

Merino Ewes.

There were only two flocks of these which came within the rules of the Society; those were five in number each. Though of fair appearance, and nearly equal in the fineness of their wool—yet your committee did not think them so to excel, as to deserve the first premium.

They therefore award the second premium of \$10 to Major Joseph Barrett, of Concord.

They recommend that a gratuity of \$10 be paid to G. M. Burr, of Concord.

The first premium they do not award.

It was a source of particular gratification which the day afforded, to see a ram and three ewes of the English new Leicester or Dishley breed of sheep. They were imported at a cost of 86l. 15s. sterling, by Charles Richmond, Esq., of Taunton, and were exhibited by S. Henshaw, Esq., of Boston. It was stated that more than 10 lbs. of clean washed wool were shorn from the ram last spring, and that the ewes averaged 7 lbs. each. This is the full average in England. These sheep give the wool of long staple, which has been thought important to our manufactures, and which the society have, by successive premiums, endeavoured to introduce. They may now be disseminated as they may be found useful. They are recommended as of pure breed, correct form, good wool, and great disposition to fatten. With the latter propensity, and their large size, their carcass must be of great value. It is further stated that they are in estimation amongst "the finest mutton sheep of England."

The Committee award to S. Henshaw, Esq., of Boston, for the Dishley or New Leicester ram, the premium of \$15.

For his best Dishley or New Leicester ewe, they award to the same gentleman a premium of \$15.

Swine.

To Silas Dudley, of Sutton, the Committee award the first premium for the best boar, \$12.

There were no other boars that were thought to merit the other premiums.

For the breeding sows, the Committee award the first premium to Capt. John Mackay, Weston, \$12.

The second premium they award to J. T. Floyd, 8 dollars.

The third premium they award to Mr. Francis Moore, of Brighton, \$5.

Store Pigs.

For store pigs, the Committee award the first premium to Capt. John Mackay, of Weston, \$10.

They were well deserving of it. No other premium could with propriety be awarded.

The Committee regret, in the last mentioned animal, when by comparison and selection so good effects have been produced, that what our farmers could show has been omitted. So also in Merino sheep; when great prices have been paid for Saxony sheep of late with us, which it is presumed are nothing more than the Merino race improved by careful selection, is it not a matter of wonder that our agriculturists do not take this mode of general comparison at the Brighton Cattle Show? This seems the best that could possibly be devised, to carry into effect the highest possible degree of perfection in this animal, so important to our manufactures. When these ends can be as well and better effected at home, let it be our pride so to act. But not so when otherwise.

The Committee have stated the many improvements in the Show within their department which have been presented this year. They have further suggested those few particulars by which it might be so perfected as to give effect and value to the like occasions in future.

The agriculturists having done so much to establish the reputation of their holiday, we think we may appeal to their good sense not to refrain from supplying these deficiencies, when the means are so fully within their power.

JOHN WELLES, *Chairman.*

DORCHESTER AGRICULTURAL SOCIETY.

The second Agricultural Exhibition and Fair, of the Dorchester Agricultural Society, took place on the 9th and 10th inst. This Society when first or-

*This cow was sold on the ground for upwards of \$60, thus producing to the owner, with the premium, nearly \$100. This must be encouraging to farmers in the selection of good stock.

ganized was confined to a single county, and was by agriculturists considered only to have a temporary existence, but the laudable zeal and active exertions of the President and Vice President, aided by a few individuals, have given to it a more permanent character and augmented its usefulness.

The exhibition of stock, domestic manufactures, &c. was gratifying to every spectator. Their number, variety and excellence, particularly of domestic manufactures, occasioned perplexity in the decision of their superiority and the awards of the committees. At 12 o'clock on the first day of the Exhibition, the President, Dr. Joseph E. Muse, delivered an able and very appropriate address on such topics as were pertinent to the occasion. At 3 P. M. the Society adjourned to their room and proceeded to the election of officers, as prescribed by the constitution of the Society.

The President had publicly declared his wish to resign, but in consideration of the unanimous adoption of the following resolutions, he consented to serve another year. The warm interest he always manifested for the advancement of the main objects of the Society, and the liberal expenditure of money in agricultural experiments, were the causes of the following resolutions.

On motion of John R. Pitt, Esq. the following resolutions were read, and unanimously adopted.

Resolved. That the thanks of this Society be presented to the President and Vice President, for the zeal and ability with which they have supported the objects of the Society, and they be considered unanimously elected.

Resolved. That the President Dr. Joseph E. Muse, is entitled to the gratitude of the agriculturists of Dorchester county, for his experiments on an enlarged scale of introducing cotton as a staple more productive than wheat or corn.

Resolved. That he be requested to prepare a memoir on the culture of cotton, in this state, embracing such collateral subjects as he may think necessary.

On motion of Mr. Pitt.

Resolved. That the President of this Society be requested to furnish a copy of his address for publication in the Cambridge Chronicle and American Farmer.

On motion of Mr. Samuel Lecompte.

Resolved. That as a testimonial of our respect and esteem, the Treasurer of the Society be, and he is hereby directed to purchase two silver goblets, and present them to the President, Dr. Muse, and Vice President, Dr. Woolford.

On Motion of Dr. Joseph E. Muse.

Resolved. That the American Farmer, edited by John S. Skinner, Esq. of Baltimore, is entitled to the patronage of the "Dorchester Agricultural Society," as an able advocate of agricultural interests.

Resolved. That the above proceedings of the Society be published in the Cambridge Chronicle and American Farmer.

OFFICERS ELECTED FOR 1827.

President.—Joseph E. Muse.

Vice Presidents.—Thomas Woolford, Anthony Manning.

Treasurer.—James Dixon.

Secretary.—Luther M. Scott.

Curators.—James Dixon, Wm. V. Murray, William Hughlett, John N. Steele, James Thompson, Joseph Byus, John R. Pitt, William W. Eccleston, Thomas H. Hicks, Thomas I. H. Eccleston, James Pattison, John C. Henry.

AGRICULTURAL SOCIETY OF THE VALLEY

The annual exhibition of the Agricultural Society of the Valley was held in this town last week. The ample report of the proceedings furnished by the secretary, supersedes the necessity of our giving a

sketch. We refer the reader to it, with the single remark, that the prospects of the Society never appeared so bright, and that those who had regarded it as an experiment, the ultimate success of which was doubtful, have had every fear removed by the general enthusiasm which pervaded the minds of all on the occasion.

We understand that the vice-president declines furnishing a copy of his address for publication. This we regret, as it was an able composition, which ought to be in the possession of every farmer.

[Winchester Republican.]

SOIL AND CLIMATE OF THE WESTERN AND ATLANTIC STATES.

(From the Western Tiller.)

Estimates and calculations, predicated on results of the Atlantic agriculture, are fallacious when applied to the west. Those who hypothesize by parallels of latitudes in the cis and trans-Alleghany regions, will be greatly disappointed; the estimates must be predicated on the longitudinal, instead of the latitudinal scale.

The city of Cincinnati is a few minutes only south of Philadelphia, and three degrees eighteen minutes south of Boston; yet its climate, and that of the region surrounding it, is perfectly Italian, while that of the latter is harsh as Siberian. The elements are not softened and converted by the southern position of the west, but by a peculiar locality. The winds on the Atlantic sweep the shores and interior with uninterrupted violence; bringing with them in winter the piercing colos of the Frozen ocean, Newfoundland, or the northern lakes. In fall and spring they are but partially softened by the greater contiguity of the sun, and still retain a rigour and roughness, destructive to the relaxed and relaxing animal fibre.

The frosts commence frequently in October, on the 25th of which permanent snows have fallen. In December, January, and February, cold is often intense; storms of snow, deep, attended with bitter cold winds. Animals of the farm require constant attention and large quantities of food; in the coldest seasons it is often necessary to give them exercise, to prevent the effect of cold upon their limbs; the earth is closed, its surface covered from them, and the snow often too deep to admit of their roaming in quest of shelter or browse from the forest: these circumstances greatly increase both the care and expense of the husbandman. The amount of food required for a due proportion of stock, is both a heavy tax upon the summer's labour and winter's care. It is not uncommon to commence strewing as early as November. In proportion to the contraction of the animal muscle from cold, will be its laxity on the approach of heat; care and due feeding will lessen this effect. The approach of spring is sudden and irregular; diseases are common in stock, especially those not well attended: sheep suffer most sensibly. If the yeanning be a little too early, the young die in great numbers, the dams are feeble, the milk scant and not nutritious, if the feeding has been neglected; the winds continue damp, harsh and piercing, and are, if possible, more trying to the yeanning than deeper winter. Of fifty lambs, I have frequently known from twenty to thirty lost in the first two days after yeanning; the loss is not, perhaps, often as great—the amount depends on the season and condition of the flock. The spring and summer are short, frosts late—of course seeding is a critical period. This division of the seasons produces great hurry and bustle in the affairs of the husbandman; seed time and harvest are short, the winters long and severe. It may be said that winter divides the empire of the year. Take a parallel of the cis-Alleghany region: the moment you touch the valley of the Mississippi and its large tributaries, the elements are changed;

spring woos her flowery empire within the month of March; as early even as February the wood violets open their delicate blows; the daffodils in early April; the peach blooms in March and April, and have been seen in February; in early March and late in April, the earth is clothed in rich grass and herbage. Seeding commences for gardens in March; corn may be put in from the last of April to the last of June; frosts are rarely injurious after April; they have been known frequently in May. The summer heats continue generally through August, sometimes violent. The falls are warm and agreeable, dry and favourable for harvest and fruits. The harvest of small grains is from three to four weeks earlier than in the east. Corn may be harvested at any period of winter. It sustains no injury from the season; the corn of the east ripens here in August; that in general use is the southern or gourd seed, and ripens in September early; its yield is one bushel of clean grain to a half and a half of ears—the product from fifty to sixty bushels to the acre, with comparatively little cultivation. To the mild reign of fall and with very little perceptible change, that of winter succeeds. For the tempest and frozen snows of the north, we have white frosts, warm days, occasional rains; and light transient snows, but scarcely a high wind in our coldest weather; the warm breezes of the south floating up the valley of the Mississippi, temper the chills of winter with their genial influence. Herds roam at large and feed in winter months upon the abundant herbage of the field and forest; if not abundantly, the addition they require at the hand of the husbandman is small in comparison to that of the east. Danger from cold and storms, and consequently the anxiety and attention which these occasions, are scarcely known. In the spring, stock exhibits a strong and healthy appearance; sheep in particular suffer little from winter exposure; no attention is paid to their yeanning—the season is good from February to May, and but few yeannings die. I should suppose thirty-three and a third per cent. a moderate calculation in favour of the western yeannings. The situation of the vegetable kingdom is equally favourable. Apples from seed to fruit are from six to seven years; (in the Atlantic states from eight to nine;) the growth thrifty, bark of tree smooth and healthy, size of fruit large, flavour good. It is allowed that the growth of fruit trees in the Atlantic states, is over those of Europe as five to three; in the portion of the valley of the Mississippi of which I am speaking, I should suppose the growth over that of the Atlantic states, to be about the same.

In soil and climate we have decidedly the advantage over the seaboard. The consequence to all the departments of husbandry is, perhaps, thirty-three and a third per cent. in our favour: in enterprise and industry, and attention to practical improvements, we are in the rear.

HESSIAN FLY.

FRIEND J. S. SKINNER,

It is said, that the young wheat, especially the early sowing, looks very fine; but that there is a great quantity of the hessian fly in it; and by many, doubts are entertained, that the crop will sustain much injury in the spring, which I think very probable.

This being the case, of course it cannot be altered; but it may be highly prudent, and much to the advantage of the community, that the farmers use some preventive. I think it most likely that the price of flour will advance so much before next harvest, that some one will say, that wheat is very scarce: indeed, some pretend that flour is high at the present time.

Now, without going into detail, I will just state the matter of fact, which every observing farmer

may understand perfectly by a little reflection; at any rate, if they will examine, they may see that it is the case; that at this time, the fly exists in the wheat near the stool, and just above the ground. But the fact is, *and a happy circumstance that it is so*, that it cannot exist under ground. This being the case, the preventive that I would suggest is, to harrow the wheat with a light harrow, with teeth very close. I think the harrowing should be done when the ground is dry, *at least on the top*.

The consequence will be, that the harrow will throw considerable dirt on the stools of the wheat, which, I presume, will be the readiest way to destroy a great deal of the fly; and independent of that, it will be quite an advantage to the crop, to use the harrow, even if there be no fly in it, and though harrowing may seem to tear the wheat about very much, still it will benefit it quite as much.

My opinion is, that it would be best to harrow the wheat before winter sets in; and again, as soon as the ground gets in order in the spring.

Very respectfully, M. B. MECHANIC.

Georgetown, D. C., 11 mo. 14, 1826.

N. B. If the wheat should be very stout, it may require a very heavy harrowing to throw as much dirt on it as would be best. I have no doubt in my mind, that as much pulverized dirt as would lay on a cent, properly put on a stool of wheat, would kill every fly in it, though it might contain enough to destroy three such stools (or plants.) M.

LARGE VEGETABLES.

DEAR SIR, Nottoway, Nov. 11, 1826.

I notice in your last paper an account of some very large vegetables; I thought I had raised some very large, but am beaten. I raised a pumpkin, weight 103 lbs. I have one, about eight inches long, that is five feet in circumference. I raised a radish that weighed 114 lbs. and was twenty one inches in circumference. One of my neighbours raised a red potato, weight 64 lbs. and is twenty seven inches in circumference. I saw it myself. Another curiosity: I killed a cow for beef a few days ago, she had in her a twin bladder, one about double as large as the other.

I send you a few seed of the holy thistle; I think it a very valuable medicine for fall complaints, where bile is the cause. It is completely salts and tartar; for it both pukes and purges, but more mildly. One of my neighbours brought it from Tennessee several years ago, and has made use of it ever since; they have generally a very healthy family. I have made use of it this fall, and am well pleased with it. It is quite innocent, as the patient can eat or drink anything, and it will have its effect. The dose is two table spoonfull of the seed, beaten in a mortar, and mixed with a small portion of cold water, small persons in proportion. It is very easy raised, and has small prickly pods that contain the seed, which, when ripe, opens, and then is the time to gather them; they will continue to bear until frost.

Be good enough to send me a few of the new grass seed from Missouri, and get from one of your valuable subscribers the best method of trapping or destroying the common muskrat, they are very troublesome to my dyking.

Yours, respectfully,

EDMUND ISLY.

LARGE BEET,

And a very dreadful and mortal disease amongst the Horses in Worcester county, Maryland.

DEAR SIR, Synapuzent, Nov. 26, 1826.

In these days, when farmers appear to be in some measure compensated by the size of their vegetable productions, for the miserably stinted price which all the yields of agriculture command, I have

thought that the following account of a vegetable mammoth, might not be unacceptable.

There is now, in the garden of my neighbour, John F. Fassitt, Esq., a *blood beet*, which measures, below the prominences which sent off the leaves, and where the root is fair and smooth, precisely three feet round, and which weighs, freed entirely from its top, and from all earth adhering by careful washing, full twenty-six pounds! If any of your numerous friends can beat this, or have done or ever will do so, I shall be pleased to learn that there are better lands and more skilful gardeners than we can boast.

I have not time, or I would plague you with an account of a distemper which I fear will destroy all our horses. Briefly, their tongues are so dreadfully ulcerated, that the power to manage their food, is entirely lost. The appetite is good, the respiration natural, the head free from disease, and indeed with the exception of costiveness, there is no symptom of disease independently of the tongue. Of this member, the whole papillary surface on the outer half, has sloughed to the depth of more than 1-8 of an inch, within three days from the beginning of the attack. If in your power directly, or through your intelligent correspondents, to give me counsel in this matter, I shall be particularly obliged. You can conceive of the importance of this disease, when I tell you that our carriage and riding horses, and three of the work horses, are already affected.

In haste to embrace the mail, I am very truly, yours, JOHN S. SPENCE.

J. S. SKINNER, Esq.

HORTICULTURE.

ON THE MULBERRY, SILK, AND WINE.

(From the Village Record.)

After Frederick of Prussia had enlarged his kingdom, and reaped a full harvest of that sort of renown that arises from having slain, in successful battles, near a million of his fellow men, he sat down to improve his country. This was truly noble. Here he acted the statesman—the sage—the father. I want, said he to his minister at London, a *schemer*—one who is good at laying plans and making calculations. The minister, in reply, spoke of an Italian, as wild a schemer as his majesty could wish—always laying grand plans for improvement, but himself, poor as a church mouse. Beware, added the minister, lest he lead you astray. Send him on, said the king. Let him plan; we will then exercise our own judgment. Accordingly — went to Berlin. Some of his schemes were rejected—others adopted, to the great benefit of Prussia. If we mistake not, the manufacture of its elegant porcelain was a work the result of his suggestion.

But whence does all this lead? Is it a mere story or has it an application? You shall hear.

Our agriculture is much depressed. We used to export 20 millions of dollars worth of bread-stuffs; we do now export only five millions—so greatly has that branch of trade fallen off. Formerly the United States fed the armies of Europe; now Europe raises bread to spare. Our habits of farming were to sow and plant from forty to sixty acres out of an hundred in grain, when there was a large demand abroad. Although there is no demand abroad, we continue nearly in the old way, to sow and plant the same fields; the market is glutted—300 bushels of wheat bring \$270, when 200 bushels ought to bring that money, to be upon an equality with the prices of other articles of traffic. What is to be done? Shall we go on in this way under all changes

*They seize with greediness every article of food which comes in their way, but soon drop it, as if conscious the effort would be fruitless.

of circumstances, and carry the grist in one end of the bag, and the keppel stone in the other, because our fathers did so?

There are agricultural productions which we import to a large amount, which our citizens will not do without, six or eight times more profitable to produce than wheat, and which our own farmers might as well raise, as to purchase from India or Europe. We are, in fact, tributary to the farmers in India and Europe to the amount of ten millions a year—paying them enormous profits, while our own agriculture is languishing. The articles to which we now have special reference, are silk and wine. More than ten millions worth of silk was last year imported. The precise amount stands thus:

Silk goods from India, . . .	\$3,694,707
Do. other places, . . .	6,576,820
Do. Raw, . . .	8,090
	10,279,617

Exported.

Silks from India, . . .	\$1,380,231
Do. other places, . . .	1,155,505
Do. unmanufactured, . . .	21,639
	2,587,375

Leaving for our own consumption, . . . \$7,692,242

The India silk, it will be remembered, is paid for in silver, and is a heavy drain upon our specie.

Of wines, the importation last year was 3,160,528 gallons.

A portion of this was undoubtedly of those fine wines which we cannot hope to equal for some years, if ever; but the greater proportion of it is of that quality which we can certainly make with ordinary care. An old negro, who lived with a wine merchant in the city, said one day, "he was sure his master must come to ruin; he bought and rolled into his cellar an hundred hogsheads of cider every year, and never a drop went out again; he could not think where it went to, and was sure his master must be ruined." The presumption is, that one-third of the wine imported is drank pure—that the other two-thirds are more or less intermixed; and probably there is sold from an importation of three millions, five millions of gallons. More Madeira wine, as it is called, is sold in England, than the whole island of Madeira produces. The common wines we drink are adulterated, and often by an admixture of poisonous substances; but by making our own, the public could have it pure, wholesome; and it would become a substitute for burning, consuming poisonous whiskey. The French are less addicted to intemperance than the English or the Russians; and the reason assigned is, that they drink wine that cheers and enlivens, instead of whiskey and brandy, that inebriates and brutalizes.

Would it be profitable to raise silk and wine? It is believed highly so.

Mr. Genet, in his memoirs on the subject of silk, states, that "an ounce of the seed of the silk worms will produce 40,000 worms, that will consume one thousand pounds of white mulberry leaves, easily supplied by fifty grown trees, or two hundred small ones, between two and three years old from the seed or from the slip; and the produce in silk will be upon an average twelve pounds of drawn raw silk, allowing all contingencies.

"A small hedge that will occupy the twentieth part of an acre, being planted with bushes not more than three years old as aforesaid, will supply and accommodate 100,000 worms, the produce of which will be thirty pounds of raw drawn silk; and if the whole acre is planted in the same way, the produce will be six hundred pounds, which if merely spun into sewing silk, would amount at the present price of American sewing silk in Albany, to three dollars per pound, sixty feet to the skein, and one dollar and fifty cents per thirty feet."

According to this statement, land in white mulberry trees in full growth, would give a produce of \$1800. In our opinion, there must have been some error in the data from which this distinguished gentleman made his calculations. Mr. Fitch, of Mansfield, Conn., a town which produces silk to the amount of \$15,000 in value a year, (and suppose each township in Chester county produced that amount, 42 multiplied by \$15,000=\$630,000—six hundred and thirty thousand dollars! That would be a handsome sum;) has the following statement: "One acre of full grown trees, set 1½ rods apart, will produce 40 lbs. of silk.

"The labour and the board, may be estimated at eighty dollars. The spinning the silk at thirty-four dollars. Forty pounds of silk, at the lowest cash price, is now worth two hundred dollars; which makes the following result:

40 lbs of silk, at \$5 per lb. . . .	\$200.00
Labour and board,	\$80.00
Spinning,	\$4.00
	114.00

Which makes the nett proceeds of one acre, 86.00

"The principal part of the labour may be performed by women and children. But where the business is carried on to any considerable extent, it is considered more profitable to employ some men for the last period of the worms.

The above calculation is made upon full grown trees.

The price at the lowest cash prices."

So that the produce of an acre would be \$200, and the clear profit \$86. That I think would be good farming. Here let it be remarked that a very large amount in value of silk, is used in the simple form of sewing silk, the manufacture of which is extremely simple. There is no information possessed by the Treasury Department, enabling it to state what proportion of the *ten millions of dollars* of the article imported is sewing silk; but from several calculations and estimates made, it is presumed to exceed a million of dollars, and must every year increase. Silk, in other simple forms, is also extensively consumed. It is not necessary, therefore, to presume that intricate and costly manufactures of silk be introduced here to insure a market for twenty years to come. It should, moreover, be considered, that the raw silk will always find a ready market in England—all the raw materials for her extensive manufactories being imported.

Then for wines. According to the very fair account of Mr. Eichelberger's vineyard, given us in the York Recorder, it appears that four acres the 5th year, produced 30 barrels of wine; the 6th and 7th year, 21 barrels; this year the produce is estimated at 60 barrels. But we will take the actual produce of the 5th, 6th, and 7th years, 72 barrels—30 gallons to a barrel, would be 2160 gallons.

3)2160 gallons,

720 average number of gallons in a year for the four acres.

4)720

180 gallons for each acre.

Worth,	\$180.00
Add for grapes sold,	15.00
for cuttings,	5.00

Would give per year, per acre, \$200.00

"It must be remembered, too, that about sixty dollars worth of grapes have been sold.

"The wine is now selling at \$1 per gallon."

From which it would appear that the average value of the produce of an acre in vineyard, would be the same as that of the mulberry, \$200.

In this statement, it has not been our intention to exaggerate in the least.

Our plan then is. First—That every farmer who can see his way clear to do so, put out five acres in an hundred; one half in the Italian mulberry and one half in the grape, and try fairly the experiment.

And second, that several companies be formed to enter upon the business extensively. Say one, to purchase in some part of the country where land is cheap 200 acres at 20 dollars \$4,000

20 dollars an acre for grape and mulberry cuttings or shoots, and setting out	4,000
Interest and labour for 3 years, when it will begin to be productive, wine-press, house in which to feed the worms, &c.	2,000
Contingencies	2,000
	\$12,000

4th year pay all expenses, interest, and replace any which may have died.

5th year produce per acre, \$50.

6th do. do. 100.

7th do. do. 200.

Of which \$80 per acre, or \$16,000 clear profit, paying the whole purchase money, and leaving a most valuable and productive property.

Archibald Stephenson tells us that, in France, those who shewed him the mulberry trees, "assured him that a good many of the largest of them brought a return to the farmer's family of a louis'd'or each of them, yearly." That is twenty shillings sterling, or \$4.44 each, merely for the leaves of the tree, which are sold to silk raisers to feed their worms. Why should they not be as profitable here? How many full grown trees would stand and thrive on an acre? Of the vine 800 will flourish in perfection on an acre. A gentleman of intelligence said to the writer of this, that he esteemed every bearing vine certainly worth a dollar.

The greatest difficulty we meet with is that, in the most sober, and subdued, and moderate calculation we can make, the product increases too fast—we grow rich too rapidly.

But all these calculations must be taken with considerable allowance. We should be truly sorry to be the means of leading any one into any expensive scheme, or involving project; but believing, as we do most honestly, that every acre of land in the county now worth twenty dollars, may be made worth an hundred, by the culture of the silk and the vine, we have felt it our duty to call public attention to the matter, & that it may become a subject of thought—of conversation—of calculation. The intelligent public will examine the matter for themselves.

In the mean time where the white mulberry exists we entreat that they may be preserved; that cuttings may be taken in as great numbers as possible, to be set out next spring. We know the Italian mulberry flourishes well here. It has been tried. We know excellent silks may be made here, for we have had the pleasure to see dresses, or specimens of dresses, still beautiful and fine, made thirty or forty years ago in this county. If we could live to see Chester county producing half a million of dollars of silk, and as much in wine, without diminishing in value her other products; verily we could die in peace, and would have our remains deposited beneath a wide spreading mulberry, the branches of which should bend with the mantling vine, hung with clusters of delicious grapes.

PROJECTOR.

RURAL ECONOMY.

ICE HOUSES—ANSWER TO INQUIRIES.

DEAR SIR,

Baltimore, Nov. 17, 1826.

Observing in your useful paper of the 3d instant, an application from R. C. Shorter, Esq., of Georgia, on the construction of ice houses, and having had some experience in that way, I take the liberty of sending you my observations on that subject.

I have found that the larger the house the better, on account of the quantity of ice it may contain; that the situation (if practicable,) should be in a high, dry, airy place, with a north aspect, and in a sandy or gravelly soil, to absorb and carry off the water and drippings from the ice. In preparing for the construction of the house, a pit should be dug 20 to 22 feet square, and 20 feet deep, so as to admit of a log pen of 18 to 20 feet in the clear, with a layer of logs placed in the bottom to keep the ice 18 or 20 inches from the ground; the log work to be raised about two feet above the surface of the ground, and left open for air, and the roof to be covered with straw of considerable thickness, to resist the rays of the sun and carry off the rain. The ice should be put in, in large thick cakes, without pounding or breaking and stowed as close as the cakes will admit of, observing to place straw between the ice and sides of the pen, from bottom to top, and to cover the top of the ice with dry straw to the depth of 15 or 18 inches, which covering should be removed occasionally in the course of the summer, and replaced with other dry straw. When the ice melts round the sides, as will be the case in the summer, dry straw should be stuffed in to fill up the vacancies and keep the air from the ice. In this way I have kept and preserved ice for many years, from one season to another; but I do not conceive it would be practicable to preserve ice for any length of time in low moist situations. If you think these observations will be of any use, they are at your service, and am

Yours, very respectfully,

P.

J. S. SKINNER, Esq. }
Ed. Am. Farmer. }

[The above contains what is termed *multum in parvo*. We apprehend it gives the best directions, in the best, because the plainest terms, for the construction of ice houses, the selection of the site, and the packing of the ice. We are inclined to think that oak leaves, in lieu of straw, for covering the ice, where convenient, would be attended with advantage.]

BORING FOR WATER.

It will be seen by the following articles, that the plan of boring for water in different parts of the country, is likely to be attended with success. An enterprize of the kind is now going on in our own city, which will not, we hope, be readily abandoned. The probability of obtaining water here, in this manner, reasoning *a priori*, is as great as that of obtaining it on the Newark meadows. If successful, the benefit will be incalculable. A pure perennial fountain will be obtained, out of the reach of droughts, and of the causes that sometimes pollute and render unwholesome and unpalatable the springs that lie near the surface. [N. Y. Ec. Post.

Messrs. Boyd and McCulloch, of this city, are still indefatigably engaged in boring for water to supply their extensive brewery; and, we are happy to add, they have every prospect of complete success. They have penetrated as deep as 360 feet, 320 of which has been through a slate rock. The water now rises to within three feet of the surface of the earth. Gas, which affords a brilliant light, is procured from the well. [Alb. Daily Ad.

Renewed evidence of the excellence of this plan is offered by the result just obtained upon the Newark meadows. The families inhabiting this great plateau, have hitherto been compelled to procure all their water for domestic purposes from the upland, at a distance of from 2 to 3 miles.—By means of Mr. Disbrow's apparatus, a plentiful supply of excellent water has been obtained at a depth of 104 feet from the surface. The perforation was made near the junction of the Newark and Belleville turn.

pike roads. The following is a memorandum made by the workmen, giving the various strata through which they bored:—

"1st. Vegetable deposit,	8 feet.	
Beach sand,	5 "	
Stiff potters' clay,	36 "	6 inches.
Sand,	0 "	6 "
Potters' clay,	33 "	
Sand,	7 "	
Potters' clay,	10 "	
Red coarse clay,	4 "	

104 feet.

At which depth we came to free stone rock, and finding that the 7 feet strata of sand gave us an abundant supply of excellent water, we ended our labours."

The water rises to within 24 feet of the surface in a cast iron tube of 8 inches diameter, into which the pump is inserted. [Times.

INTERNAL IMPROVEMENT.

(From the Philadelphia National Gazette.)

CHESAPEAKE AND DELAWARE CANAL.

SIR—I have observed, with much pain, for some time past, a systematic attempt to decry every thing doing upon the Chesapeake and Delaware Canal.

To me, it appears truly surprising, that so little respect should be paid to the rights of the stockholders, who certainly are as liable to sustain damage by injurious representations, as are the stockholders of any other company. Were the statements true, they would not be justifiable, inasmuch as no person has the right wantonly to injure the property of another. It is sometimes said, that the banks are all sliding in; and the canal filling up faster than it can be excavated. Then it is said, that the embankments on the marshes are all swallowed up, and then again, the summit bridge has fallen in.

I am located at a sequestered spot, called Back Creek, on the Eastern Shore of Maryland. I seldom see the newspapers, and we get little news here, even about the Canal, except from strangers who come from a distance. On Tuesday morning, just as I was starting to attend to my business, a gentleman of high standing, from Baltimore, rode up to the door, and while his breakfast was preparing, for I board in a tavern, entertained us with the latest news from the canal. He said that all the contractors had failed, the work had entirely stopped, and the summit bridge was about falling in. All these things must be true, for he had heard so in Baltimore, and had seen it in the Washington newspaper. Undoubtedly, if it were possible to ruin the Company, and cause this great national work to be abandoned, no better way could be devised—and indeed this is the only way, for there are no intrinsic difficulties but what are, or can easily be, surmounted. Had one half the pains been taken to prejudice the people of the State of New York against the Erie Canal, that has been taken to write down this, that canal would probably have never been finished. It is well known that mistakes were made there, though fewer than might reasonably have been expected. That canal overran the original estimates nearly 500,000 of dollars. It was well known at the commencement, that the deep cut would be a very difficult and expensive work, and a very liberal estimate was therefore made; I speak of the estimates of the examining engineers, who finally passed upon the work. Have any serious difficulties occurred which were not foreseen? Assuredly not. And every one must allow, that the work has progressed with more rapidity than was anticipated even by the most sanguine. Is not the bridge at the summit a most capital one? And has it failed, or is it likely to fail in any respect? It is

undoubtedly true, that at the marshes more money has been expended than was at first anticipated; but the sum is not great, and the important difficulties are now believed to be surmounted.

Perhaps it is improper for one situated as I am, to say any thing upon the subject. So much has been said, however, by persons opposed to this canal, which has had an indirect tendency to do me injury, by deterring labourers from coming here, and in various other ways, that I do feel myself called upon to set the public right, so far as relates to the work immediately under my direction, which comprises nearly one-half of what is commonly called the deep cut, and all the excavation and embankment westerly therefrom to the locks on the waters of the Chesapeake, and including also those two sloop locks with all the excavations, embankments, coffer dams, &c. appertaining thereto. The whole of my excavation amounted to about 1,400,000 cubic yards, and the embankment to about 130,000 yards. Of the excavation 1,100,000 yards are done, and of the embankment 100,000 yards are completed. With respect to the two locks they are both nearly finished, and are both at this time receiving the coping, and have been pronounced by competent judges equal to any work of the kind, either in Europe or America; and so far from there being any truth in the report that new difficulties are occurring, and that the work is now progressing slowly, the fact is the reverse; for I have excavated more cubic yards, and have made more cubic yards of embankment during the last four months, than during any four preceding months; and this applies to each of the four months, when compared with any one preceding month; and I am now doing as much work every day on the canal as I have ever been doing heretofore. There have been excavated from the deep cut, from an average breadth of 25 feet, about 200,000 cubic yards, and there have been made about 70,000 cubic yards of embankment, during the same period, the last four months.

It is now upwards of nine years since I commenced as a canal contractor upon the Erie canal, since which time I have been constantly engaged in the construction of canals, and I am free to declare my belief, founded upon what little experience I may have gained during that period, that there are no difficulties upon this canal but what might have been reasonably expected, and none but what may be easily surmounted. My contract, which embraces all the hard excavation on the whole line, would have proved an exceedingly profitable one, had the prices of coarse grain and labour continued as they were when the contract was made. The stale story, of the impracticability of ever making a canal on this route, is still going the rounds. These people of little faith, remind me of a small anecdote which I will relate. When I commenced operations, about four years since, upon my last contract on the Erie canal, on the Eastern section, near the margin of the Mohawk river, I recollect very well that an old Dutchman, through whose farm the canal passed, asked me with a very incredulous countenance, if I believed the canal would ever be done. "Certainly," I replied. "Well," said Wemple, "I'll ask to live no longer than 'till I see a boat sailing through this cornfield." The canal was finished through his cornfield in six months—and my old friend, Ephraim Wemple, now keeps a snug little tavern by the side of the canal; where he smokes his pipe, and laughs at all doubting Dutchmen.

Should any persons be desirous of viewing this canal, and thereby testing the truth of these statements, they will find me at or near the canal line, where I shall be exceedingly happy to furnish them with any information in my power.

S. NEWTON DEXTER,
Contractor for the Western section of the
Chesapeake and Delaware canal.

Back Creek, Nov. 10, 1826.

LADIES' DEPARTMENT.

THE MOTHER.

[The following very judicious and entertaining reflections on the highly important office and duties of "THE MOTHER," when considered in the light in which philosophy and humanity would teach us to regard them, are taken from that instructive and elegant weekly miscellany—the "NEW YORK LITERARY GAZETTE." Though its length will compel us to divide it, and to appropriate the "LADIES' DEPARTMENT," for two or three successive weeks, to its insertion, yet it will well repay for all by its amusing tenor, its sound sense and salutary instruction.]

The equality of the sexes, is a question that has long been agitated, but never settled. There have been so many examples of intellect in women equalling any displayed by man, that it is not wonderful that they should claim the same rights and privileges, or complain of injustice, when those claims are denied. These complaints, however, and the causes by which they were excited, are every day decreasing; for every day is woman arising in the scale of being, and by the development of virtue and talent will eventually settle the disputed point, and prove that, though nature has made differences, it has made no inequality between the sexes.

In no part of the social system is the progress and improvement of society more striking than in the education and condition of the female sex. The time is past when beauty excited exclusive admiration, and conferred the most distinction; yes, the supremacy of beauty has given place to that of talent, and in our eye we see more homage paid to intellectual than to personal charms. [The beautiful and graceful Madame Recamier shrunk into comparative insignificance by the side of her homely, but enlightened friend Madame de Stael, and while the name of the first was scarcely known out of Paris, and is now forgotten, that of the former is known through the civilized world, and will live as long as the language of her country lives.]

The education of women is no longer confined to household duties, or showy accomplishments; but is extended to a knowledge of science, literature and the arts, in each of which they offer examples of excellence rivalling any afforded by the other sex. This excellence we are disposed to allow and to encourage, so long as it is confined to objects, neither incompatible with the delicacy or the duties, which nature, as well as society, has imposed on the sex.

But *ambition*, in the common acceptation of the term, is a passion which always will prove as adverse to their happiness, as to their delicacy and duty. *Ambition*, though called the passion of noble minds, leads to hypocrisy, servility, meanness, falsehood, and every other vice which degrades humanity. A female *intrigante* or politician, (a sight too common in Europe,) is as offensive to good taste, as to good morals; and is scarcely less revolting to our feelings than a female warrior; since the base and conflicting passions of political life, are as much at variance with the candour and purity of the sex, as scenes of blood and carnage are with its sensibility and tenderness.

The love of distinction, the desire of praise, is an innate sentiment of the human breast, and has been implanted in our nature by the author of our being, for the best and wisest purposes. It is the secret and elastic spring which puts in motion the talents and virtues of mankind. We would not check, we would only direct its operation; let it then be indulged while it stimulates the mind to the attainment of excellence and the performance of duty.

While we would imperiously close the career of political or military ambition against the aspirants

of the other sex, we would open to them that of science, literature, the fine arts; that of domestic duty and social benevolence. In these pursuits they will have an opportunity to display an equality of mind and a superiority of virtue. Here while we leave them as women, we shall emulate them as rivals; and while indulging our admiration, shall not lose our respect.

We would do more—we would fain stimulate and encourage women to the attainment of intellectual and moral excellence, by every consideration which the praise of man, or the approbation of God, affords, and for this purpose would point out to them those pursuits in which they can acquire influence in the affairs, and distinction in the ranks of society, without compromising the duties of nature, or the delicacies of sex.

In the division of social duties, there are two, for which they are peculiarly fitted, both by the inclinations of nature and the habits of society; I mean education, and charity.

For an enlarged or correct performance of either of these important duties, cultivation of mind, purity of morals, and economy of time, are equally necessary, and will therefore afford a scope for the exercise of the strongest mind, most brilliant genius and ardent enthusiasm; thus conferring beauty and dignity, on objects of practical utility.

Whatever are the advantages of public schools, there are deficiencies which can never be supplied but by paternal care. A domestic education, conducted by an enlightened father, would perhaps be the best a child could receive; but as the avocations, and even the dispositions of men, seldom, if ever allow of their devoting their time to this important task, if it was devolved on a well-instructed mother, the advantage would be equal; in many respects superior, for as Hayley, in his life of Cowper, justly observes, "Woman has, in general, much stronger propensity than man, to the perfect discharge of parental duties, and seems as if designed by nature, not only to nurse and sustain his infancy, but to train and cultivate his mind, teaching the young idea how to shoot, and to regulate his affections and form his temper."

The nature of man is threefold, animal, moral and intellectual, and the perfection of that nature depends on the culture and improvement of all these different parts.

The first that is developed, is the animal or the corporeal part, which the laws of nature and society, equally devolve on woman: then follows the expansion of the temper, affections, and passions, which constitute the moral portion of his nature, and in proportion as this is submitted to the government of judicious mothers, is the purity and excellence of this part of our being.

The mind too, begins at a very early age to develop its powers. Its capacity for the reception of ideas, can be distinctly known only to the mother who has watched its growth. She only can tell, the kind and the quantity of knowledge it is fitted to receive, and therefore she only can adopt and proportion instruction to its natural powers.

A teacher, ignorant on this point, might by giving too little, stint and starve the infant mind; or by giving too much, might distort and enervate its faculties.

Besides, a father, however affectionate and intelligent, cannot be as well acquainted with a child's dispositions and abilities, as the mother, who has watched the development of its affections and the expansion of its intellect; therefore cannot apply rewards and punishments, stimulants and restraints as judiciously. By him, timidity may often be mistaken for sullenness, slowness of apprehension for obstinacy, and the tears of sensibility, for those of peevishness, and thus may punish where he should reward, and reprove where he should encourage.

Although to make a good instructress, the mother

should be herself well instructed, is correct, as a general rule; yet there are exceptions to this as well as every other rule, and an instance I have lately met with, has convinced me that attention and affection, with a good natural understanding, is suffi-

cient for the performance of this important task. As many a fond mother may be deterred from undertaking this sacred and endearing duty by a diffidence of her qualifications, I will relate the instance to which I have alluded:

SPORTING OLIO.

THE HEIGHT OF RACE HORSES.

[Every reader knows that the vulgar objection, for such we think it may be called, to the use of the blooded stallion is, that the stock is too *small* for all other purposes; and even those who have a disposition to rear blooded horses, will often object to a stallion of the best strain because he is little, if any, over fifteen hands high, and will have recourse to one of inferior pedigree, if he happen to measure an inch or two more. The owner of the mare is too apt to forget that much more depends, for the size of the progeny, on the size and form of the dam than on the height of the sire; and that after all physical power, whether displayed in mere strength at a dead pull, or in swiftness on the turf, is more the result of a *well organized frame with plenty of sinew*, than on sheer height or bulkiness. Do we find that the largest hound is the fleetest or the most enduring? That your overgrown beef eaten men possess either spirit, activity, or any sort of capacity for continued and vigorous exertion? So it is with horses. It has been clearly shewn by the valuable historical observations of "AN ADVOCATE OF THE TURF," that a large proportion of the most distinguished race horses have not exceeded 15½, and many have not risen above 15 hands. We give here a list of the height of horses renowned on the British turf, with a view of confirming what has been said, and to do away as far as possible, that unfounded impression that the best foals are only to be had from the *largest* horses: under the influence of which, stallions of inferior blood and worse points are often preferred.]

TO THE EDITOR OF THE ANNALS OF SPORTING.

Sir,—I am not aware that the *exact* height of Eclipse has ever been stated; but two of my friends who knew the old horse well, inform me that he was about 15½ hands high: the same may be said of Flying Childers. Judging from the portrait of Mr. Darley's Arabian, recently discovered, I should estimate him to have measured 15 hands; which will also apply to the Godolphin Arabian.

Probably you will consider that I have cited a sufficient number of cases for one month's publication. Should you, however, wish to see this enumeration brought down to our own days, you have only to express yourself to that effect at the next "Sportsman's Levee."

I remain, sir, yours, &c.

STEPHEN ROUTH.

Forehoe, August 19th, 1826.

Name, Colour, when Foaled.	Height.	Owner or Breeder.	Sire.	Dam.
Aaron, b. 1747	13 3½	Mr. Rogers	Whitenose	Diana.
Ancaster Starling, gr. 1738,	14 2½	Mr. Crofts	Bolton Starling	Partner m.
Babraham, b. 1740	16 0	Lord Godolphin	Godolphin Arabian	Large Hartley m.
Badger, b. 1737	15 0	Mr. Crofts	Partner	Woodcock m.
Blacklegs, br. 1744	13 2½	Mr. Shearden	son of Smiling Ball	dam by Vane's h.
Blaze, b. 1733	15 0	Mr. Panton	Flying Childers	Confederate filly.
Bolton, ch. 1743	15 0	Duke of Bolton	Sweepstakes	Bay Bolton m.
Bywell Tom, alias Lightning, ch. 1747,	14 1	Lord Byron	Cade	Partner m.
Cade, b. 1734	15 0	Lord Godolphin	Godolphin Arabian	Roxana.
Old Cartouch, the property of Sir W. Morgan, of Tredegar, was bred by Mr. Elstob, a Yorkshire gentleman; he was got by the Bald Galloway; his dam by the Hampton Court Cripple Barb. This nonpareil did not exceed 14 hands in height; yet no horse in the kingdom was able to run with him at any weights from eight to twelve stone.				
Young Cartouch, ch. foaled in 1731, the property of Lord Portmore, was bred by Lord Weymouth; he was got by Old Cartouch, his dam, (own sister to Red Rose,) by the Hampton Court Chestnut Arabian, out of Mr. Crofts Pet Mare. Although a galloway only, he proved himself to be much superior to many sized horses of his year.				
Cato, b. 1748	14 2'	Lord Rockingham	Regulus	Partner m.
Champion, b. 1739	14 2½	T. Vavasour, Esq.	Goliath	Daughter of the old Montague mare.
*Chance	15 1	Duke of Queensberry, Black Chance	Partner m.	
Chub, or Tamerlane, b. 1746,	15 0	Lord Godolphin	Godolphin Arabian	Hobgoblin m.
Conqueror, gr. 1752	15 2	Mr. Panton	Crab	Miss Slamerkin.
Crabstock, gr. 1750	14 1½	Mr. Cornwall	Crab	sister to Spinster.
Crispin, ch. 1751	14 0½	Mr. Adams	Ancaster Starling	Whitefoot m.
Dainty Davy, b. 1752	14 0½	Duke of Cleveland	Traveller	Slighted-by-all.
The Darley Arabian, about 15 hands high.				
Dormouse, b. 1738	14 1½	Lord Godolphin	Godolphin Arabian	Partner m.
Euston, gr. 1769	14 3	Duke of Grafton	Antinous	Brilliant m.
Fanny, ch. 1751	14 1	Mr. Blake	Tartar	a daughter of Jigg.
Fearnought, br. 1751	15 1	Lord Godolphin	Godolphin Arabian	Hobgoblin m.
Forester, ch. 1750	14 2½	Mr. Vernon	Forester	Looby m.
Fox, b. 1749	13 3½	Mr. Hunt	Goliath	a daughter of Jigg.
Gamester, br. 1753	14 0½	Mr. White	Tarquin	Saucebox m.
Genius, br. b. 1753	15 2	Mr. Keck	Babraham	Aura.

* Chance ran near-wheeler in Lord March's (Duke of Queensberry) celebrated carriage match, at Newmarket, August 29, 1750.

Name, Colour, when Foaled,	HEIGHT. ha. in.	Owner or Breeder.	Sire.	Dam.
Gimcrack, gr. 1760 . . .	14 04	Sir C. Bunbury . .	Cripple . . .	Miss Elliot.
The Godolphin Arabian, br. 15 0				
Gower Stallion, b. 1740 . . .	15 1	Lord Gower . . .	Godolphin Arabian . .	Whitefoot m.
Highlander, gr. 1742 . . .	14 1	Lord Portmore . .	Victorious . . .	Chesterfield Arab m.
Infant, b. 1746 . . .	15 2	Lord Sandwich . .	Godolphin Arabian . .	Hobgoblin m.
Jigg, ch. 1741 . . .	14 04	Mr. Hunt . . .	Goliah . . .	a daughter of Jigg.
Judgment, b. 1751 . . .	14 14	Mr. Swinburn . . .	Snip . . .	Cottingham m.
King Pepin, b. 1743 . . .	14 04	Mr. Dutton . . .	Cartouch . . .	Whitefoot m.
Liberty, b. 1749 . . .	14 14	Mr. Pytt . . .	Hazard . . .	sister to Blank.
Lightfoot, br. 1747 . . .	14 2	Lord Eglingtonne . .	Cade . . .	Bay Bolton m.
Little David, b. 1747 . . .	13 3	Lord Gower . . .	Gower Stallion . .	Miss Vixen.
Little Driver, ch. 1743 . . .	14 04	Mr. Lamego . . .	Beavor's Driver . .	Childers m.
Little Partner, ch. 1745 . . .	14 1	Mr. Pearson . . .	Forester . . .	Partner m.
Lofty, b. 1753 . . .	15 0	Mr. Pantou . . .	Godolphin Arabian . .	Spinster.
Mary Tartar,* ch. 1751 . . .	14 0	Lord Rockingham, . .	Tartar.	
The Mixbury Galloway . . .	13 2	Mr. Curwen . . .	Curwen Bay Barb.	
Moorecock, gr. 1740 . . .	14 14	Mr. Rogers . . .	Hutton Blacklegs.	
Priscilla, b. 1756 . . .	13 34	Mr. Curwen . . .	Cade . . .	{ a mare of Mr. Hut- ton's.
Pumpkin, gr. 1746 . . .	14 2	Mr. Rogers . . .	Steady.	
Ranger, b. 1749 . . .	14 14	Mr. Hutton . . .	Spot . . .	Mixbury m.
Ripon,† ch. 1749 . . .	14 14	Captain Shafto . .	Forester . . .	sr. to Stadtholder.
Second, b. 1732 . . .	14 24	Duke of Devonshire, . .	Flying Childers . .	Basto m.
Shakespeare, ch. 1745 . . .	15 3	Lord Godolphin . .	Hobgoblin . . .	Little Hartley m.
Shorthose, b. 1753 . . .	13 3	Mr. Stanhope . . .	Regulus . . .	Second m.
Silverleg, ch. 1743 . . .	13 34	Lord Portmore . .	Young Cartouch . .	Old Cartouch m.
Sloe, bl. 1740 . . .	14 34	Mr. Pantou . . .	Crab . . .	Childers m.
Spider, ch. 1752 . . .	14 04	Lord Portmore . .	Young Cartouch . .	Miss Langley.
Sprightly, br. h. 1754 . . .	13 34	Mr. Swinburn . . .	Cade . . .	Cartouch m.
Syphon, ch. 1750 . . .	15 0	Mr. Fenwick . . .	Squirt . . .	Patriot m.
Tartar, ch. 1743 . . .	14 34	Mr. Crofts . . .	Partner . . .	Meliora.
Teaser, gr. 1739 . . .	13 14	Mr. Crofts . . .	Bolton Starling . .	Bay Brocksby.
Torismond, gr. 1739 . . .	14 24	Mr. Crofts . . .	Bolton Starling . .	Miss Partner.
Trimmer, gr. 1748 . . .	14 0	Duke of Bridgwater, . .	Cade . . .	Young Greyhound m.
Young Traveller, ch. 1746, . . .	15 0	Mr. Coatesworth . .	Traveller . . .	Bartlet's Childers m.

* Mary Tartar's dam was purchased at Malton fair, in 1750, for three pounds and a noble, and five shillings returned for luck. Her pedigree could never be traced. After the bargain was made, the purchaser, (Mr. Barker, of Nawton,) impressed with the idea of her having been stolen, refused payment, until she had been properly vouched, according to the custom of fairs and markets. Her blood-like appearance induced Mr. Barker to put her to Tartar, (a son of Partner, a horse of perfect symmetry and great strength,) then covering at Oulton, in Yorkshire: in the following spring she produced Mary Tartar.

† September 24, 1755, Ripon won 50l. give and take, at Doncaster, carrying 9st. 8lb. 12oz. beating Lord Rockingham's Cato, 10st. 11lb. 12oz. and Mr. Hudson's Blacklegs, 8st. 3lb. 8oz. The first heat was run at full speed throughout by Cato and Blacklegs, Cato winning by about half a neck; Ripon just saving his distance. For the second heat all three went off at score, and in the last three miles it was impossible to say which had the advantage: near the ending post, however, Ripon got a-head, and won the heat by nearly a neck from Cato. The third heat was, also, desperately contested; but the ungovernable rate at which Cato and Blacklegs run the first heat, gave Ripon an opportunity of winning, which he did, though with a vast deal of trouble.

Before starting 10 to 1 against Ripon; 5 to 2 Cato against Blacklegs; after the first heat, 2 to 1 on Cato; 3 to 1 against Blacklegs.

MANAGEMENT OF HORSES.

Extract from the Report of the Committee on Horses, at the late Cattle Show at Concord, (N. H.)

If you have a colt which you design for a disorderly, unruly, poor, mean, short lived horse, the following directions, if strictly observed, are as good as any.

In the summer season put him into a pasture without fence or grass; and if he presumes to pass the line of brush which bounds your pasture, fether, clog and yoke him so effectually, that he can neither walk nor feed. This sort of chastisement will not only tend to abate his natural courage and strength, but to improve his gait so wonderfully, that the most experienced jockey will be puzzled to decide if he ambles, paces or canters. By this process, also, you may ornament his hoofs with ring bones, and so effectually cripple him in every leg and joint, and render him so uniformly lame, that, to a novice, he will appear like a sound horse. In the season of winter he should be suffered to run at large, in highways and on commons; so that he may learn, as the saying is, to shirk for himself, by plundering his living from wagons and sleighs. By this course of life he soon becomes familiar with clubs, pitchforks, and bulldogs, and forms a general acquaintance with all

travellers who carry oats, corn, or salt. At three years of age, he should be broken and tutored by a hopeful youth of sixteen, who will initiate him into all the sublime mysteries of racing, jumping, prancing, pawing, and biting. Thus educated, the horse is fit for service—I mean the service of his owner, and no one else. He is well qualified to carry his master to trainings, grog shops and taverns. In order to inure him to hardship, the owner of such a horse must ride, or rather gallop him at the rate of eight miles per hour, on a cold winter's night; and in the height of heat and perspiration tie him, without covering, at the north-west corner of a *tippling-shop* or tavern, where he should remain for the space of four or five hours, without eating or drinking, while his accomplished owner is within, regaling himself over a comfortable fire "with reamin' swats wha drink divinely," disputing politics and religion, chewing tobacco and smoking cigars. While the happy man is thus profitably engaged in moistening his clay, and settling the affairs of the nation, or some disputed points in religion, should his horse, from the effects of cold or hunger, presume, by neighing, to interrupt the sublime harangue of his master, he should go out occasionally—swear at him—kick him, and give him the discipline of the whip. By such kind of mild punishments, and by

feeding him plentifully upon meadow hay and rye-straw, the horse, in time, will learn patience under adversity, and grow so orderly and tame, that the owner may even skin him without his manifesting the least resentment or restlessness—About this time, also, the owner will be prepared to be skinned by his impatient creditors, who have been waiting for years and watching the progress and motions of the rider and his horse.

September 13, 1806, died, at Chiswick, the Right Hon. C. J. Fox, aged 58. This distinguished personage took the lead in every pursuit his ardent mind engaged in. Horse racing was his darling amusement: he always placed himself where the push was to be made; thence he eyed the horses with the most immovable look; he breathed quicker as they accelerated their pace, and when they came opposite to him he rode in full speed, whipping, spurring, and blowing, as if he would have infused his whole soul into the speed and perseverance of his favourite. At the termination of the contest his ardour ceased, whether he won or lost, and he directed his conversation to the next race with the utmost sang-froid.

HUNTING SONG.

Now westlin winds, and slaught'ring guns,
Bring autumn's pleasant weather;
The moorcock springs, on whirring wings,
Among the blooming heather.
Now waving grain, wide o'er the plain,
Delights the weary farmer;
And the moon shines bright, when I rove at night,
To muse upon my charmer.

The partridge loves the fruitful fells;
The plover loves the mountains;
The woodcock haunts the lonely dells:
The soaring hern the fountains:
Through lofty groves the cushat roves
The path of man to shun it;
The hazel bush o'erhangs the thrush.
The spreading thorn the linnet.

Thus ev'ry kind their pleasure find,
The savage and the tender;
Some social join, and leagues combine;
Some solitary wander:
Avaunt, away! the cruel sway,
Tyrannic man's dominion;
The sportsman's joy, the murd'ring cry,
The flutt'ring, gory pinion!

But Peggy dear, the ev'ning's clear,
Thick flies the skimming swallow;
The sky is blue, the fields in view,
All fading-green and yellow:
Come let us stray our gladsome way,
And view the charms of nature;
The rustling corn, the fruited thorn,
And every happy creature.

We'll gently walk, and sweetly talk,
Till the silent moon shine clearly;
I'll grasp thy waist, and, fondly prest,
Swear how I love thee dearly:
Not vernal show'rs to budding flow'rs,
Not autumn to the farmer,
So dear can be as thou to me,
My fair, my lovely charmer!

RECIPES.

FOR CLEANING COLOURED SILKS OF ALL KINDS, SUPPOSING AN ARTICLE OF THIS KIND BE A COMMON SIZED SHAWL.

Put one pennyworth of soft soap into a vessel of a convenient size to wash a shawl or scarf in, add to it a sufficient quantity of boiling water, keep

beating and stirring it till it be dissolved, and till a strong lather rises on the top of the water; when at a hand heat put in your shawl; then, if the texture is strong enough to bear it, it may be rubbed as easily as one would wash a linen garment; rinse it out in lukewarm water, and if it is a false colour it will be easily seen, by the colour discharging into the suds. Care, therefore, must be taken to go through the process quickly, having ready in another pan what the dyer's journeymen call "a drop of sharp," which is a small quantity of oil of vitriol, sufficient to give the water a slight acidulous or sour taste; but it must not be too strong, just a sufficient quantity to deaden what salts may be in the water; hard spring water, therefore, is best; this does for all bright yellows, crimsons, maroon and scarlets; but for orange colours, fawns, browns, or shades from these colours, it will not be necessary to use any acid. If you are cleaning a bright scarlet, and the colour should sadden or grow deeper or duller, it will be necessary instead of oil of vitriol to use the solution of tin. If the garment should be very dirty, a second or even a third liquor is required, unless it should discharge or come out too much in the liquor; but whether the colours be false or permanent, this process should be gone through quickly. As most bright colours, such as reds, yellows, pinks, and the shades from them, are furnished by spirits of a strong acidulous quality, therefore, though of all soaps the soft is least impregnated with salts, yet it contains a sufficient quantity to deaden and partly to destroy the acid. The process being too long, it therefore causes the salt to enter the pores of the substance, and attacks the dye which is within the pores, by which means the colour often fades, and sometimes is wholly discharged. To prevent this evil, as soon as the silk comes from the acidulated water, it should be gently squeezed (not wrung,) and a coarse sheet should be spread on a table, and the shawl should be put upon it, and rolled in the sheet and wrung, which will prevent the colours from running: this is what the dyers call *sheeting* silks. The shawl, &c. is then taken from the sheet, and hung up in a warm room to dry, and is finished by being calendered or mangled, without any further trouble. Some dyers press them, which is done in a cold press, or one whose irons are not hot. All kinds of silk shawls, fancy and painted, and foreign made silks are done this way. But when you have proof of the solidity of the colour, which may be known, besides the forementioned proofs, by its having worn well, if any spots of a yellow or black cast should happen to be on maroon, red or crimson, this method of cleaning will either extract or cover it. As for pinks, rose colours, and shades from them, such as flesh colours, &c., instead of oil of vitriol or solution of tin, a small quantity of lemon juice, or solution of white tartar, or even vinegar, should be added to the finishing liquor.

THE FARMER

BALTIMORE, FRIDAY, NOVEMBER 24, 1896.

The MARYLAND AGRICULTURAL SOCIETY will hold its annual meeting at the town residence of Mr. J. H. B. on Thursday, the 7th of December. It is desirable that the meeting be held in the evening, as the weather is so cold.

More of the Maryland Agricultural Society's annual meeting is desirable, that the meeting be held in the evening, as the weather is so cold.

lege, upon the decks of boats, and, for want of some convenient establishment, must go off under a forced sale for whatever they will bring, rather than be taken back. It is suggested that if some enterprising individual of character, would establish a yard for the sale of stock on commission, where they might be kept in good condition at a reasonable rate until sales could be effected at a fair price, a great deal of stock would be consigned to such an agent, and the favour thus rendered to the farmer, would create a sense of obligation, and otherwise naturally lead to the consignment of grain and other produce to such agent. In this way an establishment might be created that would be valuable and highly convenient to all parties, and whilst it would ensure a fair price to the farmer, would, by increasing the quantity, diminish the price to the consumer. A certain market for the farmer is better, even though at a more reduced average price, than a fluctuating one, which may to-day give him a liberal price, and next week afford not enough to pay cost and charges. We shall advert again, when at more leisure, to this subject.

It will be seen by the letter from Dr. Spence, that the distressing malady called the sore tongue, has appeared amongst the horses in Worcester county. An animal of such singular fidelity and utility deserves our constant sympathy and kindness. At present we can only refer to publications in the 1st volume of this journal, pages 297, and 326—7, describing the disorder as then prevailing in different parts of the United States, and pointing out the remedies which had proved effectual. The fact seemed then to be established by Mr. Haslam, that the best reliance was on purgatives freely administered, and that the disorder was not contagious.

There are several Agricultural Addresses, which have been sent to us, with the request of the Societies before which they were delivered, that they may be inserted in the American Farmer. A place shall be given to them as soon as possible; that of Dr. Muse, the zealous and scientific founder of the Dorchester County Society, will probably appear in our next.

A portrait of the celebrated Godolphin Arabian, whose blood has been transmitted through so many generations to the most celebrated racers now on the turf in this country and in England, will appear in the next number of this journal.

KIRKLAND'S ADDRESS.—The biographical sketch of Mr. Adams, given by President Kirkland, in his address on the 30th ult. contained several interesting facts, which were probably new to the majority of his hearers. It was stated that Mr. Adams in early years, possessed a decided inclination for the life of a farmer, and had actually begun an apprenticeship in agricultural labours, from which his friends were induced to withdraw him by the judgment they had formed of his capacity for pursuits more exclusively intellectual.

Important improvements in the structure of the "Cotton Planter and Cultivator," bringing that valuable implement to a high degree of perfection for various uses, have been explained to us by the inventor, but we regret, not in time for this paper.

CONTENTS OF THIS NUMBER.

Brighton Cattle Show Reports, No. 2—Dorchester Agricultural Society—Agricultural Society of the Valley—Soil and Climate of the Western and Atlantic States—Hessian Fly—Large Vegetables—Large Beet and Disease among Horses—On the Mulberry, Silk and Wine—On the construction of Ice houses—Boring for Water—Chesapeake and Delaware Canal—The Mother of Race Horses—Management of Horses—The Maryland Agricultural Society—Cleaning Silks. Editor.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00	8 50		
BACON, and Hams, . .	lb.	6	10	9	12
BEEF-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16 1/2	17	20	22
Havana,	—	14	17		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . .	—	10	12		
COTTON YARN, No. 10,	—	28	30		
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	11	12		14
CHEESE,	—	8 1/2	10	12	15
FEATHERS, Live, . .	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 3/4			
Shad, trimmed, . .	—	6 00			
FLAXSEED,	bush	80			
FLOUR, Superfine, city,	bbl.	5 12		5 25	6 25
Fine,	—	4 75			
Susquehanna, superfi.	—				none
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	52	55		
white	—	52	55		
Wheat, Family Flour,	—	1	1 1/2		
do. Lawler, & Red, new	—	1 00	1 02		
do. Red, Susque. . .	—	1 00	1 03		
Rye,	—	75			
Barley,	—	1 1/2	1 25		
Clover Seed, Red . .	bush	4 50		5 00	
Ruta Baga Seed, . .	lb.	87	1 00		
Orchard Grass Seed, .	bush	3 00		3 50	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed, . . .	—	4 00		4 50	
Oats,	—	48	50		
Beans, White, . . .	—	1 25	1 50	1 87	
HEMP, Russia, clean, .	ton	205	220		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	25			
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	6 1/2			
Bar	—	7 1/2			
LEATHER, Seal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	46	50	62 1/2	75
Havana, 1st qual. . .	—	30	32	37 1/2	
NAILS, 6a20d.	lb.	6 1/2		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62 1/2		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	30	32	40	
Spermaceti, winter .	—	80		88	
PORK, Baltimore Mess,	bbl.	11 00			
do. Prime,	—	8 00	8 50		
PLASTER, cargo price,	ton.	3 50	3 62 1/2		
ground,	bbl.	1 50			
RICE, fresh,	lb.	3 1/2		5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5 1/2	8	10	12
WHISKEY, 1st proof, .	gal.	36	38	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	29	30	50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	10 50	10 75		
Louisiana,	—	9 75	10 00	10	11
Loaf,	lb.	19	22	20	
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	
Pepper,	—	16		25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	48		75	
SHOT, Balt. all sizes, .	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Claret,	doz.	4	8	5 00	
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bld	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skippers' or Pulled, .	—	20	25		

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THE CULTURE OF THE MULBERRY AND THE SILK WORM.

[The resolutions of Mr. Miner, at the last session of Congress, have drawn public attention to this important subject, and all the developements which have followed, seem to have demonstrated the suitability of our climate to the growth of the mulberry, and the practicability of rearing the silk worm in abundance. Whether the habits of our population in the South, where natural circumstances seem to be more congenial to this new enterprise than in the East, will insure the pains and attention to minutiae which are required, we cannot undertake to say; we are satisfied, that in referring the subject to the Secretary of the Treasury, it has been committed to able and patriotic hands. To have invited his attention, as Congress has done, to a new branch of employment for the skill, and capital, and industry of his countrymen, was flattering to his admitted public spirit, and will have afforded agreeable occupation to an enlightened mind, long devoted to the public weal. It has given us pleasure, in our humble way, to collect facts illustrative of the subject, and when we shall have completed the publication of the following memoir, we apprehend, that (taken in connection with other practical essays and details of domestic experiments published in this volume of the American Farmer,) little will remain but to apply the results to the political and other circumstances of the country; leaving it to the wisdom of Congress to say what legislative provision can be made to give effect to the existing capacities and disposition to supply ourselves with silk of domestic growth.]

We shall record the further proceedings of Congress in relation to the inquiry instituted by the agricultural committee, on this and other matters.]

OBSERVATIONS ON THE CULTURE OF SILK,
By the late Archibald Stephenson, Esq., of Mongreeman, in Ayrshire.

(From the Technical Repository.)

Having resided for five years in the provinces of Languedoc and Quercy, in the south of France, where the utmost attention is paid to the culture of silk; I embraced that opportunity of observing with care, the manner in which this lucrative branch of manufacture and commerce was carried on: and, indeed, I was led to bestow the more attention upon this important subject, from an idea I entertained, that this valuable culture, by proper care, might certainly be introduced into Great Britain, particularly in the southern parts of this island, where there are large tracts of land, which would answer perfectly for the production of the mulberry tree, and which from the nature of the soil can never be employed to any great advantage in raising corn.

It appears proper to begin, by giving some little account of the mulberry tree, since, as the Society justly observes, this is the first object which claims our attention: because we first of all make some provision of food for the silk worms, before any trial at large can be carried into execution with any propriety, or indeed with any rational hope of success.

There are two kinds of the black mulberry tree which have been cultivated in France. The first of these bears a fruit well known, and frequently presented at table, being the same which is cultivated in our gardens in the neighbourhood of London. But the leaves of this tree have been found, from experience, to be too harsh and too succulent, to prove in every respect a proper food for the silk worm; and the silk it yields turns out to be coarse, and of an inferior quality.

The second kind of the black mulberry tree carries a fruit inferior to the other in point of size, and improper for the table: but the leaf of it has been

found to be superior to the first, as food for the silk worm; and it is less harsh, less succulent, and yields silk of a finer quality than the one first mentioned.

This second sort of the black mulberry is, in all probability, the particular kind, which is said to be at present cultivated in the kingdom of Valencia, in Spain, for the use of their silk worms; and, indeed, many of their old plantations in France, consist of this sort. But their new plantations consist wholly of the white mulberry tree, hereafter to be mentioned, which is the only one they now cultivate in all their nursery grounds, for the use of their silk worms; so far at least as I had occasion to see them.

There is a third sort, known by the name of the white mulberry, the leaf of which is more tender and less succulent than any of the other two, and has been found to produce silk of the finest and best quality.

Some people, I find, have been led to think, that this kind of the mulberry tree does not carry any fruit, and that it can only be propagated by layers; but in this particular the fact stands much otherwise. For although the white mulberry may not, perhaps, produce any fruit in a climate so far to the north as ours, which, however, I do not take it upon me to say is the case; yet the truth is, that in climates such as that in the south of France, this tree carries fruit in very great quantities, though it is of a smaller kind than either of the two already mentioned. It is of a dusky white colour, rather inclining a little to the yellow; and contains a number of small seeds, like mustard seed; from which large nurseries of this valuable tree are now annually raised all over the southern parts of France.

For a number of years after the culture of silk was introduced into France, the people were accustomed to employ the leaves of all the different kinds of mulberry trees before mentioned, promiscuously; and some grafts of the white mulberry from Piedmont, and from Spain, which carried a larger leaf than the one they had got in France, having been obtained from these countries, these grafts were put upon French seedling stocks, which had the effect of increasing greatly the size of the leaves, and was regarded as an acquisition, as it certainly produced a larger stock of leaves as food for the worms. The consequence of which was, that this practice of grafting prevailed for a great many years all over Provence and Languedoc.

But Monsieur Marteloy, a physician at Montpellier, who had made the culture of the silk worm his particular study for a number of years together, at last made it clearly apparent to the conviction of every body, by a regular course of attentive and well conducted experiments, that the leaf of the seedling white mulberry was the food of all others the best for this valuable insect; as the worms which were fed with this particular leaf were found to be more healthy and vigorous, and less subject to diseases of any kind, than those that were fed upon any of the other kinds of leaves above mentioned; and that their silk turned out to be of the very best quality. Since that time, namely, 1765, a decided preference has been given to this particular leaf beyond all the others.

As our British gardeners are, in my opinion, more intelligent in their business than any of the French gardeners, at least whom I had occasion to meet with in France, it may, by some, perhaps be reckoned unnecessary for me to say any thing here, with respect to the culture of the mulberry tree; but when it is considered that the culture of this tree has been so anxiously attended to in France, for a long period of years past, and that I do no more than justice to the French gardeners, when I say, that they succeed perfectly in this culture, it may not be deemed altogether improper for me to add here the method I observed to be used in France in cultivating the mulberry tree.

I shall, therefore, go on to observe, that their first object is to make choice of a spot of ground for their seed bed, of a gravelly or sandy soil, which has been in garden culture, or under tillage for some time, and which they know to be in good heart. When this ground is thoroughly dressed, they make drills at the distance of two feet from each other, in which they sow the seeds, in the same manner as they usually do lettuce for salads. They then cover the seeds lightly with some of the finest earth, after putting it through a sieve; and if the weather happens to be dry, they water it slightly once or twice a week, as they judge to be necessary. These seeds they sow as above, at any time from the end of April to the end of May, and even during the first week in June; and I observed that some gardeners, the better to insure success, were in the practice of sowing the seeds at three different times during the same season: to wit, the first sowing in the last week of April; the second about the middle of May; and the third in the beginning of June.

When the plants are fairly above ground, they take particular care to keep them clear from weeds, and from time to time, to point with a spade or a hoe, the ground in the intervals betwixt the different drills.

After remaining for two years in the seed bed, they take up the plants: such of them as are of the size of a writing quill, they plant out in the nursery grounds; each plant at two feet distance from each other in the row, and the rows at three feet distance from each other, that there may be room for cleaning and dressing the ground betwixt the plants. At transplanting, they cut off nearly the half of the root, and also cut off the tops at about six or seven inches above the ground. All the other plants which are too small for the nursery, they plant out thick by themselves, to remain for another year, or two, if necessary; after which they plant them out in the nursery ground as above. The most proper time for transplanting the mulberry tree is just after the fall of the leaf in autumn.

When the plants in the nursery are sprung, they take care to strip off the side buds, and leave none but such as are necessary to form the head of the tree.

If the plants in the nursery do not shoot well the first year, in the month of March following they cut them over about seven inches from the ground; which makes them come on briskly the year following.

When the plants are grown to the size of one inch diameter, they plant them out in the fields where they are to remain, making the pits where they plant them of the size of six feet square, and dressing the ground for twenty inches or two feet deep.

During the first year of planting out, they leave the whole buds which the trees have pushed out on the top, until the following spring, when they take care to leave none but three or four branches to form the head of the tree; and as the buds come out, they take off all those which appear upon the body of the tree, from the bottom all the way up to those which are left to form the head of the tree; and for several years after, at the seasons above mentioned, they take care to open the heads of the trees, when too thick of wood, and particularly to cut off any branch which seems to take the lead from the rest, and to engross more of the sap than what falls to its share, that the different branches may increase equally as much as possible.

After the trees are planted out, and likewise while the plants are in the nursery grounds, they take care to dress the ground about the trees regularly three or four times a year, which greatly assists the trees to get on.

Here it is proper to mention, that it is the practice in France to plant out some of their young

plants from the nursery by way of espalier, in some sheltered situation, in a garden, for example, where the soil is not over rich; and if it can be had, where the soil has a great proportion of gravel or sand; the intention of which is, to procure early leaves for the worms in their infant state; as these leaves generally come out more early upon dwarfish plants in a sheltered situation, than upon the trees planted out in a more open exposure; and upon this occasion they have also recourse for tender leaves to their young plants in the seed bed and nursery grounds.

Any quantity of the seed of the white mulberry can be obtained either from Montpellier or Marseilles, where it is regularly to be found for sale in the seed shops. And if you do not choose to trust entirely to the seed shops, a friend at either of those places may be applied to, who will take care to procure for you the freshest and best seed. It may also be obtained by the same means from Spain; the seed from which country is even preferable to that from France, as the Spanish tree carries a larger leaf than that of France, and has the leaf equally tender and good as the other, when used from the seedling trees.

From the experiments carried on by Monsieur Marteloy, that gentleman made it fully appear, that the leaves of the trees which grew in a rich soil, were by no means proper food for the silk worm, as they were too luxuriant and full of juice for them; and that the leaves of those trees which were raised in a gravelly or sandy soil, where no manure was employed, were greatly to be preferred.

From these experiments also, one of the reasons, and apparently the principal one, may now be pretty clearly pointed out, which rendered abortive the trials made in England, during the reigns of James I. and Charles II. for introducing the culture of silk into Great Britain: though that reason was altogether unknown in England, at the times these different trials were made. It appears to have been only this, that they had no other food to give to their worms but the leaves of the black mulberry, carrying the large fruit usually presented at our tables, which is now altogether rejected in France as an improper food for the worms; and which was rendered infinitely more destructive for these insects by the trees which produced them having been all of them reared in the richest ground in England; namely, in the garden grounds about London, which we know are in a manner yearly loaded with dung.

The mulberry trees ought not to be pruned the first year after planting out, for fear of making them bleed too much: but in the second spring it is reckoned advisable to dress their heads, and to continue to repeat that dressing yearly, during the next ten or twelve years; taking care to make them hollow in the middle, so as to give a free passage for the air, and to render it easy to gather the leaves. After the first twelve years are over, it will be sufficient if a dressing of the same kind is regularly given to them once every three years. But as some of the branches may probably be broken annually, in gathering the leaves, care must be taken to prune such branches as may happen to be broken, to prevent the tree from suffering by accidents.

properly. The fact that the

neither on barium nor on phosphorus.

Figure 1. The effect of the concentration of the *Agaricus bisporus* spores on the growth of *Agaricus bisporus* on the substrate. The concentration of the spores was 10⁴ spores/g substrate (a), 10⁵ spores/g substrate (b), 10⁶ spores/g substrate (c), 10⁷ spores/g substrate (d), 10⁸ spores/g substrate (e), 10⁹ spores/g substrate (f). The substrate was a mixture of 100 g of straw and 100 g of manure. The substrate was incubated at 25 °C for 7 days. The substrate was then inoculated with 10⁴ spores/g substrate (a) and 10⁵ spores/g substrate (b). The substrate was then incubated at 25 °C for 7 days. The substrate was then inoculated with 10⁶ spores/g substrate (c) and 10⁷ spores/g substrate (d). The substrate was then incubated at 25 °C for 7 days. The substrate was then inoculated with 10⁸ spores/g substrate (e) and 10⁹ spores/g substrate (f). The substrate was then incubated at 25 °C for 7 days. The substrate was then inoculated with 10⁴ spores/g substrate (a) and 10⁵ spores/g substrate (b). The substrate was then incubated at 25 °C for 7 days. The substrate was then inoculated with 10⁶ spores/g substrate (c) and 10⁷ spores/g substrate (d). The substrate was then incubated at 25 °C for 7 days. The substrate was then inoculated with 10⁸ spores/g substrate (e) and 10⁹ spores/g substrate (f). The substrate was then incubated at 25 °C for 7 days.

of leaves which come out upon the mulberry trees, after having been stripped of their first leaves for the use of the silk worm, are not allowed to fall of themselves in autumn. They are gathered for the second time with care, a little before the time they would fall naturally, and are given for food to their sheep, and eaten by them with greediness, and by that means turn out to good account to the farmer. Before the culture of silk was introduced into that part of Languedoc which is near to the mountains of Cevennes, the peasantry over all that neighbourhood were miserably poor, as their soil, which is mostly gravel and sand, was incapable of carrying crops of any kind of grain whatever. But as it was found, upon trial, to answer remarkably well for the mulberry tree, the people entered with great alacrity into the culture of silk; and they have succeeded so well in that lucrative branch, that from having been amongst the poorest, they are now more at their ease than most of the peasantry of that kingdom.

When I happened to be at Gange, which is within the district above mentioned, and which is remarkable for the manufacture of silk stockings, I was carried to see some mulberry trees, belonging to a farmer in the neighbourhood of the village, which were the first that had been introduced into that part of the country. The trees were remarkably large and fine, and little inferior in point of size to our elm trees of the middling sort. The people who obligingly attended me to show me these favourite trees, assured me that a good many of the largest of them brought a return to the farmer's family of a louis'd'or each of them yearly.

As an encouragement to the small heritors and farmers to plant mulberry trees upon their grounds, the French government are at an annual expense in keeping up large nurseries of these trees in many different parts of the country, from whence the small heritors and farmers are liberally supplied gratis with whatever numbers of these trees they desire to plant out upon their grounds; and proper directions are ordered to be given along with the trees, by the gardeners who are charged with the care of these public nurseries, that the people to whom the trees are thus given may know how to treat them properly. This beneficent public measure is attended with great advantage to the country, as the poorer people are by this means saved from the trouble and expense of rearing the trees, until they come to be of a proper size for planting out in the fields, where they are intended to remain.

From the extension of the culture of silk over all the southern parts of France, there is a great increasing demand yearly for the mulberry leaves; so that they are now become as much an article of commerce as any other vegetable production; the peasants with eagerness buying them up annually with ready money at the proper season for the use of the silk worms.

This last circumstance has given great encouragement to gentlemen of property to raise extensive plantations of mulberry trees upon their estates; as they bring in a certain and steady revenue, with little trouble or expense to the proprietor, after the trees have once passed the risk of being hurt by cattle. And this improvement is of the more consequence, because the grounds that are found to be the fittest for production of the mulberry trees, which afford the best food for the silk worms, being gravel or sand, cannot be employed with any advantage in the raising of corn, more especially where the manures lie at a distance from them.

Grounds of the above description had formerly been in use to be planted with vines; but the returns from these were far from being equal to what is obtained from grounds of the same quality when planted with wheat. In an instance of this, I shall take the liberty of mentioning the following particulars.

whose veracity I am certain I could fully depend.

• He told me there was a gentleman, a surgeon of Nismes, in Languedoc, who had a tract of very poor ground in that neighbourhood left to him by his father; which, when it came into his possession, yielded him a rent of three hundred livres, which amounts in our money to twelve guineas and a half. As this gentleman observed that the culture of silk was extending itself rapidly over that part of the country, he planted the whole of his little property with white mulberry trees, the leaves of which, as his plantation advanced, he found he could regularly sell annually for ready money to the people in the town of Nismes and in the neighbourhood, who employed themselves in the culture of silk; and my friend informed me, that these very grounds, after having been only sixteen years planted, gave a return to the proprietor of twelve hundred livres yearly; amounting to fifty guineas of our money. This improvement having been carried on under the eye of the neighbouring heritors, several of them pursued the same plan with equal success; and some of them who had grounds of the same quality which had been long planted with vines, actually grubbed up their vineyards, and planted their grounds with the white mulberry; and here let me add, that the mulberry tree is long lived, there being many instances where they have stood perfectly good for above one hundred years.

When the young mulberry trees are in the seed bed, and even when afterwards planted out in nursery grounds, and likewise for several years after they are planted out in the fields to remain, you must be careful every night, in the spring and summer seasons, to examine with care all round your plants for a little snail without a shell, which is very fond of the bark of these trees when young and preys upon them prodigiously. These snails will cut over your young plants in the seed beds and nursery grounds, and will even continue to prey upon the trees till they are pretty old; and though they do not absolutely kill the trees when planted out, yet they hurt them greatly, and retard their growth. These snails, therefore, must be gathered up every night as above mentioned, a little after sunset, which is better than in the morning, because the mischief they occasion is generally done in the night; and they must be burnt, or otherwise effectually destroyed; for if you do not kill them they will find their way again to the trees.

The water of 1765, I passed at Montauban, in Quercy, when the frost was so extremely severe that it not only destroyed the greatest part of the leguminous crops, and almost the whole produce of the kitchen garden, but also many of their vines, fig and olive trees, and a great part of the orange trees in their green houses; yet that frost, with all its severity, did not occasion the smallest injury to the mulberry trees, nor to the eggs of the silk worms. This frost continued for two months together, and was within two degrees and a half of the great frost in 1709. But what is still more remarkable, I was assured from the most respectable authority, that even the frost of 1709 did not cause the smallest injury to the mulberry trees, though it destroyed many of their vines, and almost their whole fig and olive trees all over Provence and Languedoc. From which two instances I think it may be fairly inferred, that we have no reason to dread any danger to the mulberry trees from the severity of our British climate.

I shall now proceed to give an account of the manner used in France for disengaging the seeds from the fruit of the mulberry, which requires a considerable degree of labour, as well as attention.

Having gathered the quantity of fruit you propose to set apart for seed, which must be thoroughly ripe before it is pulled, you put the fruit into a ~~bag~~ ^{box}, where you cause a person to

tramp and press it with his bare feet, in order to bruise the whole of it thoroughly, and by that means disengage the seed from the little pods or cells in which it is contained.

You must at the same time have in readiness another tub, which must be pretty deep, into which you introduce a piece of flat wood, which must be made to rest upon the sides of the tub, at the distance of six, eight, or more inches from the bottom of the tub, as you shall judge to be necessary for your quantity of fruit. This cross piece of wood is calculated to support a round cane sieve, which is to rest upon it. This sieve must be very fine, that is, the holes must be very small and close set together, that as little of the pulp of the fruit as possible may go through the holes along with the seed. Things being thus prepared, and the tub filled so far with water that it may rise more than half way up the brim of the sieve, when placed upon the piece of wood, you then put a handful or two of the bruised fruit into the sieve, which you rub hard with your hands upon the bottom of the sieve, in order to make the seed pass through the holes and every now and then you lift up the sieve with both hands, and shake it to make the water pass through it, which carries the seed along with it. Besides rubbing the fruit with your hand upon the bottom of the sieve as above, you also take it and rub it heartily betwixt the two palms of your hands, rubbing the one hard against the other; as it takes a great deal of work and pains to get the seed disengaged out of their little cells, which must be done effectually before the seeds will pass through the holes of the sieve.

This work must be repeated till you observe that the whole of the seed has passed through the holes of the sieve; after which you throw aside the pulp, and must proceed in the same manner with the rest of the fruit, until you have finished the whole.

You then take the sieve and piece of wood out of the tub, and pour off all the water, when you will find the seed at the bottom; but along with a great quantity of the pulp, which has been forced through the holes of the sieve, in rubbing the fruit hard upon the bottom of it with your hands as above mentioned.

I should have noticed, that all the seeds which swim upon the surface of the water, are light and good for nothing, and must, therefore, be thrown aside.

You then put the pulp and seed, which you find mixed together at the bottom of the tub, into another vessel, and fill the tub with water as at first; having put the piece of wood and the sieve in their proper places as before, after which you pass the pulp and seed, by degrees, through the sieve, by rubbing it with your hand upon the bottom as before, and lifting up the sieve from time to time, with both hands, and shaking it, as already mentioned. In passing it this second time you will disengage a great quantity of the pulp, which you throw aside from time to time, as soon as you observe that none of the seed remains amongst it.

You then pour off the water as before; and if you find that there is still some of the pulp remaining with the seed, you must pass it a third time through the sieve, which will effectually clean it, if your sieve is fine enough.

If your sieve is too coarse, that is, if the holes are too large, it will occasion you a great deal more work, as you will be obliged to pass it oftener through the sieve, since that operation must be repeated till the seed is perfectly clean; after which you must spread the seed upon a clean cloth, and expose it to the sun, till it is thoroughly dry. Three days, or even four days of a full sun are necessary to dry and harden the seed properly for keeping.

Upon this part of our subject it seems proper to add, that in a cool moist country, such as about Paris or London, it is reckoned the mulberry tree car-

ries a double, nay, nearly a triple quantity of leaves to what it can do in the hotter or drier climates, such as that of the south of France, which is judged to be owing to the moisture of the climate, and the superior richness of the soil. In a cold moist climate a person is not able, even with the utmost care, to produce above the half of the cocoons from the same quantity of eggs which can be done in a warmer and drier climate. But as in the colder climate the mulberry tree carries nearly three times the quantity of leaves, which it can do in the other; from thence it arises, that the colder climates, such as those before mentioned, are able, upon the whole, to raise at least as much silk, from the same quantity of eggs, as the warmer countries; because the quantity of food is the great article, as the grain or eggs of the silk-worm can easily be multiplied to as great a quantity as you please.

II. Having thus gone through the articles of greatest importance, so far as they occurred to me, in relation to the first and leading branch of our subject; the next which naturally falls to be considered, is the method observed in France in hatching the worms. But before proceeding to this article, it may not be improper to premise the following particulars, as they seem justly to demand a very particular attention.

Here then I must observe, that the greatest care ought to be taken to procure healthy good seed or eggs, because it has been ascertained from repeated experience, that the eggs from those houses where the worms were infected with bad air, carries along with it to the worms produced therefrom, the same distempers to which the worms of the preceding year were subject.

The eggs, in order to be properly preserved, should be kept in some dry place, with a free air not too hot; and that you should avoid keeping them in any vault or cellar under ground; because any kind of damp is found to be destructive to them.

The eggs of the silk worm have been found to degenerate in the space of five years; hence a change from time to time is judged to be necessary, taking care to have the eggs brought from a warmer to a colder climate. This, however, must be done by degrees, and not carried at once from one extreme to another. For example, eggs brought from the Levant, the isle of Cyprus, or from other countries of the same latitude, ought not to be brought at once into such a cold climate as that of Flanders, or the north of France; but should be first brought into such a climate as that of Provence or Languedoc, from whence, after having remained there for two or three years, it can be brought with safety into the colder countries.

The first year that the eggs are brought from a warm to a cold climate, you must not expect great success from them; on the contrary, you will find, though the utmost care and attention are given to them, that the greatest part of the worms will die. But still you will be able to save enough to stock yourself sufficiently with eggs, which every succeeding year will be found to answer better as the worms become naturalized to the climate, which can only be brought about gradually; and indeed more time will be requisite for this purpose in Britain than in France, as the climate upon the continent is more fixed and steady than with us in England.

In transporting the eggs from one country to another, especially when this is done by sea, you must order them to be put into a bottle, which ought not to be filled more than half full, that the eggs might not lie close together, which might run the risk of heating them, and causing them to hatch. The bottle, though but half full, leaves sufficient room to the eggs, so that they may be tossed upside down, by the motion of the vessel, which keeps them cool and fresh, and hinders them from heating. After putting the eggs into the bottle, let it be carefully corked; a cover of leather over the cork; and let that be sealed, to

prevent any danger from changing the eggs. When corked and sealed as above, put the bottle into a double case, or box of wood; not only to preserve the eggs from all damp from the sea, or otherways, but also to protect them from too much heat, which would cause them to hatch. If the bottle is too full, the eggs will lie too close one upon another, and will in that case heat of themselves, and hatch, and consequently in both cases must be lost.

The eggs that are duly impregnated by the male butterfly are of a grey cindery colour, which colour they preserve till they are properly prepared for hatching, as after-mentioned. The eggs which are not duly impregnated, are readily to be distinguished from this circumstance, namely, that after having been kept for some time, they always continue to be of a yellow colour; and I need scarce add, that all such eggs are good for nothing, and ought, therefore, to be thrown away. There is no distinguishing between good and bad eggs, but by the change of colour, after being kept for some time, as above mentioned.

One ounce of eggs will produce 40,000 worms; and so in proportion, for a larger, or smaller quantity.

These things being premised, I shall now proceed to describe the method I observed to be used in France for hatching the worms. In order to avoid the loss which must necessarily follow, if the mulberry leaves should happen to be destroyed by frost, after you have begun to prepare your eggs, they reckon it advisable to divide them, and prepare them for hatching at two different times, at the distance of ten or twelve days, the one after the other.

The advancement of the season determines the time of preparing your eggs for hatching, as you proceed to that as soon as you observe that there is a prospect of having a sufficient quantity of food for your worms, by the advancement of the leaves of the mulberry. But in order to be properly prepared for this work, you must begin a month before the usual time of hatching; first to put your eggs in little divisions, from half an ounce to an ounce, which you must place upon a piece of clean white paper, upon plates, for example; and put those plates containing the eggs in a place a little warmer than where you had kept them during the winter; for example, if you have an alcove bed, place them upon the shelf within the alcove. Let them remain in that situation for the first five or six days, after which you must prepare some little chip boxes, perfectly clean and neat, seven inches long, four inches broad, and four inches high, and cover them on the inside with clean white paper, into which put the different divisions of your eggs, having a small box for each division, and place these boxes in a basket, upon a stool or chair, at the foot of your bed; making one of the mattresses of your bed go underneath the basket; and cover the basket on the top, first with some cover of woollen cloth, which pin close over it, and above that place a bed cover above all, so as to keep in the heat communicated by the mattress to the eggs; in which situation let them remain for six days longer, after which increase the heat to 14 degrees of Reaumur's thermometer,* preserving that heat equal, day and night, by means of a little fire in some corner of the room at a distance from the bed.

In the morning when you get up, put a heater of one kind or other: for example, a tin bottle with hot water, or a foot stove, into your bed betwixt the sheets, and proportion that heat so as to equal the heat you give to the bed, when you lie in it yourself; keeping up the same heat as nearly as you can, until you go to bed again yourself in the evening.

Having kept them in this situation for eight or nine days, you must then put your different divisions of eggs into little pieces of old linen cloth, which

* Or about 59 degrees of Fahrenheit.

5 lbs.	Portuguese wool	40 cts.
2	Saxony, No. 2	40
3	do 1	40
3	do	64
10	Imperial Sax'y wool, 2 sold	1 51
10	Electoral do do	1 72
8	superfine lambs' wool	46
5	Saxony do	46
6	do do	46
7	super clean Spanish	62
10	E M R do	92
20	1st sort lambs' wool, very clean	48
20	same wool	48
1	No. 19 common Saxony wool	33
1	20 Saxony lambs' do	51
1	41 do do	44
1	162 fair quality Saxony	51
3	163, 169, 170 com. do	29
1	166, 1st quality Saxony sorted pieces	64
1	162, 2d do do	51
1	168, 3d do do	26
2	9, 10, B Ayres wool, M	4
14	South American	9
3	2d qual. lambs' wool, washed	33 1/2
1	lambs' wool, black,	27

AGRICULTURAL AXIOMS.

In no department is Bacon's celebrated maxim "knowledge is power" more true than in regard to agriculture: hence no farmer can be accounted skilful in his profession who does not avail himself of the information to be derived from the experience of others, and who does not improve his knowledge of husbandry by the perusal of the ablest works that have been written on that subject. It is absurd to imagine, that the communication of knowledge by printing, which has promoted the advancement of every other art, should be of no use in agriculture.

Endeavour to raise good grain, for it will always sell, even in years of plenty; whereas it is only in dear and scarce seasons that there is a demand for grain of an inferior quality.

Let your stock of cattle, horses, &c. be of the best sorts, and more remarkable for real utility than for beauty or fashion.

Be not above your profession, and always consider it as the first that any man can follow.

Admit no guest into your house, who cannot live upon the productions of his own country.

No farmer ought to undertake to cultivate any more land than he can stock and manage to advantage. It is better to till 20 acres well, than 100 in a slovenly manner.

A man's owning a large farm is no excuse for imperfect tillage. What he cannot improve he need not undertake to cultivate. Most of our lands in the vicinity of villages, if left to the operation of nature, will soon be profitable for fuel and timber. Large pastures may be profitable with no other labour than what is necessary to keep them clear of bushes. But to run over 20 acres of ploughed land or mowing land, for what, with good cultivation, may be obtained from five acres, is the quintessence of bad husbandry.

A large farm without skill, capital, or industry, is a plague to its owner. It is like what somebody said of self-righteousness, the more you have of it the worse you are off.

Be not afraid of trying experiments; but let them be on a small scale at first, and few at a time.

BARLEY.

We last year took occasion to recommend to our agricultural friends more attention to the cultivation of Barley. We were induced to do this by the high price of the article at the time, and the prospect of a continued demand, afforded by the increased con-

sumption of malt liquors in our country. The price which it brings the present season, confirms the correctness of the remarks we then made, and furnishes the best encouragement to our farmers to appropriate more of their land to this species of grain. By an advertisement in our paper this week it will be seen that one dollar and ten cents a bushel are now paid for Barley at the Brewery in this place, and at half this price, if we are correctly informed, it would not be an unprofitable crop. The quantity raised in this State is so small, that the brewers are obliged to procure most of their supplies from abroad. It is certainly desirable that our own farmers should avail themselves of the demand for this article. [Con. paper.]

[We have always been of opinion that Barley might be cultivated much more extensively, with comparative advantage in Maryland. The present price is from 90 cents to \$1.25 per bushel.]

LARGE POTATO.

MR. SKIDNER,

Dear Sir,—The following is a description of a Sweet Potato, raised by E. Pettigrew, Esq. at Lake Phelps, Tyrrel county, N. Carolina. By inserting it in your paper you will oblige

A FRIEND TO AGRICULTURE.

The weight of the potato was eleven and a quarter pounds, the length two feet, and the circumference nineteen inches. Mr. P. had several others of nearly the same size.

EXPORTS FROM NEW ORLEANS.

The following is the amount of cotton and tobacco exported from New Orleans during the last five years, viz.

	Bales of Cotton	Hhds. of Tobacco.
In 1822	156,030	21,995
1823	171,431	19,371
1824	143,943	5,910
1825	204,557	16,849
1826	251,924	18,180

So we see that Cotton has increased in the great amount of 100,000 bales in four years; but the average of Tobacco exported is less than it was.

LADIES' DEPARTMENT.

THE MOTHER.

(Continued from page 288.)

[To render the sense of the subject more complete, should the reader not recur to the last number for the first part of this article, we here repeat the last paragraph of what was there inserted, on the office and duties of the Mother.]

Although to make a good instructress, the mother should be herself well instructed, is correct, as a general rule; yet there are exceptions to this as well as every other rule, and an instance I have lately met with, has convinced me that attention and affection, with a good natural understanding, is sufficient for the performance of this important task. As many a fond mother may be deterred from undertaking this sacred and endearing duty by a diffidence of her qualifications, I will relate the instance to which I have alluded.

I lately paid a visit of some weeks, to a friend of mine, who lives on an estate remote from any city or large town. He had an only son, to me one of the most interesting youths I have ever met with, though probably he would not be so to most persons.

He was tall beyond what is usually called tall at his age; very slender and very pale. His manners were so shy and reserved for some days, that I thought him dull and stupid, and was induced to think he did not converse because he had nothing

to say; but the eager and intelligent countenance with which he listened to the conversation of others soon changed this supposition, and made me believe his silence proceeded from timidity. I therefore by gentle and insinuating attentions endeavoured to gain his confidence and conquer his reserve. In this I soon succeeded, for beneath a cold exterior, and bashful and reserved manners, he had a warm heart and ingenuous disposition.

We are all physiognomists by nature, and though the principles of this science may not be understood, its sensations will always enable us to read in the countenance of another what is passing in the mind, and where kindness and sympathy are discovered, kindness and sympathy will be excited. Thus at least it was, with my young friend and myself, and without the aid of many words we formed an acquaintance with each other, which soon ripened into confidence and intimacy.

He undertook to be the guide and companion of my rambles, and while he led me into the deepest recesses of the forest, explored the caverns, or climbed the sides of the mountain, in search of their natural productions—or walked with me through the garden, over the grain fields, or by the banks of the river, he displayed an extent and variety of knowledge which I have seldom met with in any, and never before, in so young a man.

He had the most minute, as well as extensive information, on subjects of natural history. Not a tree, not a plant, not a bird or insect that we met with, but he could give me a history of. With the mineral, he seemed as well acquainted as with the vegetable and animal kingdoms, and to this practical and useful knowledge, he added not only an acquaintance with, but an enthusiastic love for, the poets, both ancient and modern. The apt and frequent quotations which burst from him, were occasioned by some analogy between the verse and the objects and the scenes around; they had no tincture of pedantry, but seemed the overflowings of an abundantly stored mind.

Homer, Euripides, Sophocles, Virgil, Horace, Lucian, with all the other Greek and Latin poets, seemed even more familiar to him than any of the modern, except the English. With Horace in particular he seemed so familiar, that one would have supposed that instead of an ancient author, he had been his every day companion and friend; and whether we eat or drank—walked abroad or staid at home—expatiated on the charms of the country and solitude, or the pleasures of the city, and society—on the virtues of poverty, or the vices of the rich—of poets and of statesmen—for every scene and every subject he had some apposite verse from his favourite Horace, to illustrate and enforce his observation, and this with such perfect simplicity and such an ardent enthusiasm, that it was evident that he did so to display the beauties of the poet and not his own learning.

I used to love to draw him out, and though I thought myself a pretty good scholar, I often learned information from him, which I had not derived from books, and was astonished at his accurate and correct knowledge of the history, customs and manners of the ancients.

As he was an only son, and of course would inherit the large and valuable plantation of his father, he was not destined for any profession; having much leisure, without any inclination for society, his whole time was devoted to books, rural occupations and amusements. No wonder then that his mind was so richly stored.

One day we were comparing our own times with their manners and vices, with those of former ages, and to prove one was as obnoxious to satire as the other, I repeated some lines from an English poet, and then some of Juvenal's in the original. He stopped me, telling me he did not understand Latin. I was astonished, and could scarcely believe him.

and inquired how then it was possible for him to be so well acquainted with the Latin authors.

"Solely through the medium of translation," he replied.

"Yet," continued I, "it seems strange that you should not have acquired the language, when you are so completely imbued with the spirit of these authors, and have so accurate and extensive a knowledge of the history, manners and writings of the Greeks and Romans, all of which indicate a degree of study and research which is seldom met with, how comes it then you have not made yourself a master of these works in the original?"

"Simply," he answered, "because my mother was unacquainted with those languages, and I have never had any other instructor than my mother."

"Is this possible?" I exclaimed; "why few, very few of our young men who have been educated in our colleges are as well versed in classic literature."

"The reason is obvious," said he, "the very deficiency from which I suffered, viz. the want of a more learned preceptor, made me a more diligent and laborious student. In order to supply this deficiency, I applied myself with indefatigable perseverance to a study of critics and commentators, whose copious notes and illustrations awakened a degree of curiosity, and excited a closeness of attention I should not otherwise have felt, and induced me to study the natural and civil history of the country in which these poets lived, and of the people whose manners they described."

"Had I read these authors in the original, and under the direction of a learned professor, I should have rested satisfied with the usual routine of instruction and a progress equal to that of my fellow students. But having no teacher on whose judgment I could rely, and being unacquainted with the originals, the only way in which I could judge of the translations I read, was by comparing one translation with another, analyzing their different beauties; referring to commentators, and again testing these by the historians and prose writers of the age or country in which they wrote. Such a course of study naturally filled my mind with more ideas, than a study of the languages could have done; but though it may have enlarged, I will not pretend to say it strengthened my intellectual faculties more than the acquisition of these dead languages would have done. This is a disputed point, and many learned men maintain that no other kind of knowledge is so useful in strengthening and disciplining the mind. Be this as it may, one result has been, to make me more intimately acquainted with these illustrious authors, and to have fixed not only their sentiments, but the figures and descriptions by which those sentiments were illustrated indelibly in my memory, and initiated me more perfectly into their beauties than could probably have been done by the common course of collegiate studies. Since all those wearisome days, months, and years which are there bestowed on the acquisition of the languages, I have most delightfully employed in acquiring the knowledge of what these languages contain."

"You almost confirm me in an opinion I have sometimes indulged," answered I, "that the years employed by boys in the study of Greek and Latin is so much time thrown away, which, while it loads the memory with words, leaves the mind destitute of ideas; such at least is too often the case."

"Not exactly so," answered my young friend, "words must convey ideas; but one effect I have myself often witnessed, which is, that the study of these languages is so laborious and irksome, that it too often gives the young students a disgust to the works which they are obliged to study, in order to acquire the language, a disgust, which prevents them afterwards reading them; and this I believe is true reason why so many young men, after leaving college, never look into a classic author."

"But," continued I, "in all the other branches of knowledge, I perceive you have likewise made a greater proficiency than most young men of your own age."

"If this is the case," said he modestly, "it must arise from the same causes; first, that the years devoted to learning the languages, I devoted to other studies; but still more to my mother's care and influence over my mind. My constitution, even from my infancy, has been so frail and so liable to disease, that she would never suffer me to be sent from home. She was the play-fellow of my childhood, the friend and companion of my youth. In fact she has been all, and every thing to me."

"Every one prognosticated that I should be a spoiled child, meaning an ignorant and vicious one. Often was she urged to send me to school, and asked of what value life and health would be, if she left me destitute of education. It was in vain she assured her friends that I should be neither ignorant nor vicious, and that she would educate me herself. Her friends smiled, and seemed to think such education as a woman could give, would be little better than none at all."

"Such opinion rather piqued my mother, and stimulated her to persevere in a scheme suggested by her affection. As I have said, she has been my sole companion. In early childhood, it was through the medium of conversation that she conveyed her instruction."

"I learned reading, writing, and arithmetic, by way of amusement and occupation. Above all, she cultivated my faculties as they successively developed themselves. First, perception. By her undivided and sedulous attention, she gave an accuracy to my faculty of perception, which proved one of the best foundations of future knowledge. For instance, as soon as I could speak, if I were playing with a flower, she would ask me how many petals it had, what was the colour, the form—how many leaves, the length of the stalk, &c. and then make me compare it accurately with others. It was thus with every object I touched, every thing which engaged my attention, all of which she subjected to the same minute and scrupulous examination. This habit gave a truth and distinctness to my perceptions, that I have found of the greatest use when applied to scientific pursuits. My judgment, my memory, even my imagination were improved and exercised by equally simple methods. It would be an endless task to enumerate the means she employed to strengthen, to enlarge, and ornament my mind. Such as it is, it is all her work—a work to which she has devoted her whole time and attention. Every walk, was for me, not only a lesson in natural history, but one in morals, religion and taste. It was from the works of God, oftener than from the works of man, that she drew her instructions;—Nature, the ever open volume in which we studied, where we find the finest examples of sublimity, beauty, and utility."

"She made me remark the wonderful adaptation of every thing for the purpose for which it was designed, equally displayed in the revolutions of the planets and the organization of the meanest insect, or smallest flower."

(To be continued.)

GRAND HARMONICON.

DEAR SIR,

If you consider a description of the musical instrument I have lately invented, a suitable piece for the "Ladies' Department" of your paper, I will cheerfully give it; while, at the same time, it will gratify me to see it inserted.

The "Grand Harmonicon," the name under which it has been patented, although not new in its principles, is yet different in its construction from all those musical glasses which have heretofore been

exhibited, and competent judges have pronounced it decidedly superior. It combines great power with extraordinary sweetness and richness of tone, and it is susceptible at the same time of the utmost variety in its combinations. So soft are its tones, that some have called it the "*Æolian Harp* harmonized," while others, on hearing its rich and powerful chords, have been deceived by supposing it a well toned organ. Though capable of executing the most rapid passages, it is so soft and plaintive music that it is best adapted, affording a rich treat to the lovers of Scotch and Irish melody.

The science of music is, by means of this instrument, brought within the compass of the meanest capacity; half an hour's instruction will give any one, who is at all acquainted with the rudiments of music, a full conception of it, and a few weeks' practice will make a pleasing performer. I have known several ladies to play any simple melody, at sight, very sweetly, within an hour after seeing the instrument. Its simplicity, however, will be apparent to any of your musical readers, from the following description.

The Harmonicon consists of twenty-five glass goblets, arranged in a square of five rows in front and as many deep, and comprises sixteen natural notes, with all the relative semitones. The lowest and highest notes are



The annexed scale, representing the instrument arranged in the key of C, displays the whole at a single glance.

C ⁸	C ¹⁵	B ¹⁴	G ¹²	B ⁷
D ¹	C ¹⁵	B ¹⁴	A ¹³	D ⁹
D ⁹	E ¹⁰	F ¹¹	G ¹²	F ⁵
C ⁸	B ⁷	A ⁶	G ⁵	G ⁵
C ¹	D ²	E ³	F ⁴	F ⁴

The figures shew the order of succession among the naturals and their corresponding semitones in the right hand and upper front rows.

Each glass has a label pasted on it, giving the name of the note, which saves the trouble of studying the gamut; for this is constantly in view while performing. The sound is elicited by passing the ball of the middle finger, when wet, gently along the periphery of the glass. The touch is acquired in a very few minutes. In fact almost any one can do it on the first trial. Some of the glasses are made to require water to bring them to proper tune, to afford a facility in wetting the fingers. The quantity necessary, is shewn by a mark drawn through the label.

In performing, only those sixteen glasses, comprised within the double lines, are to be used, dispensing with the right hand and back rows, unless an accidental flat or sharp should intervene, when it will be found in the proper place. The above scale, as before remarked shews the instrument arranged in the key of C; but it is easily adapted to any other, by changing those notes which require to be made flat or sharp, for their respective semitones. In this it possesses an advantage over all others. For example: if the music is set in A, with three sharps in the cliff, then let F, G and C natural change places with F, G and C sharp, and in like manner with any other key. Having set the instrument to the music, every key is played alike. The

following scale shows the instrument in the key of A.

C	C	B \flat	G	B \flat
D	C \sharp	B	A	D \sharp
D	E	F \sharp	G \sharp	F
C \sharp	B	A	G \sharp	G
C \sharp	D	E	F \sharp	F

As soon as the learner can play a dozen simple airs, he should begin to throw in the accompaniment, which, to an amateur, will afford the highest pleasure, and give a fine opportunity of displaying his taste. A *second* is composed chiefly of thirds, fifths, sixths and octaves. The instrument being arranged to the *key*, it follows that every third glass are *thirds* to each other; every fifth, *fifths*; every sixth, *sixths*; and every eighth, *octaves*. Nothing can be easier than to throw in these *chords*, according to the taste of the performer; and the various combinations which may be thus introduced are endless. A very little practice will render this so perfectly familiar, that it will no longer be necessary to have the *second* written.

The Harmonicon was invented solely for my own

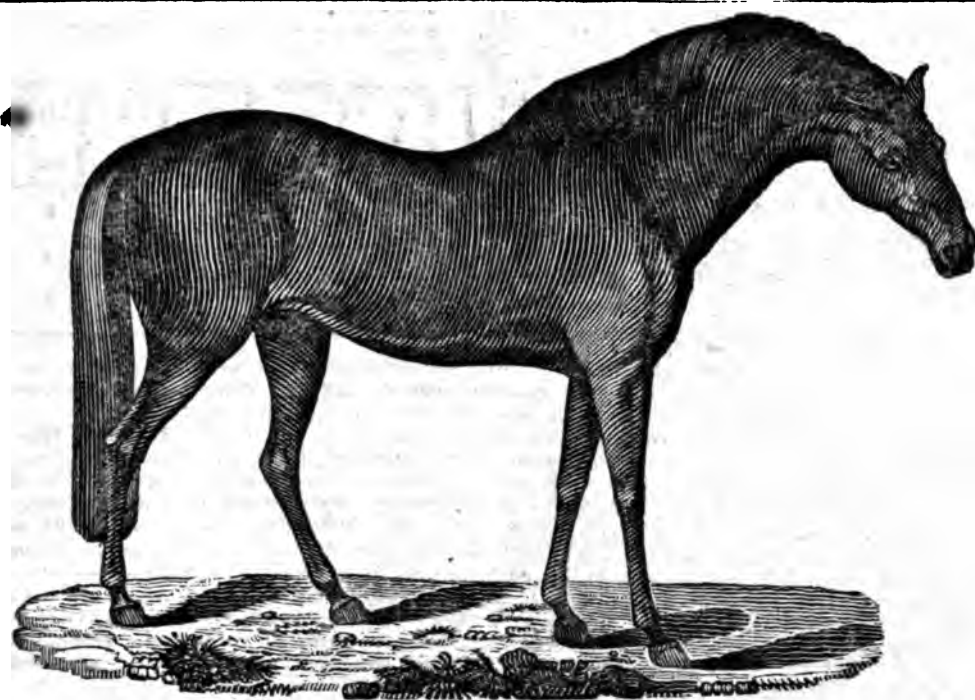
amusement, and is the fruit of my leisure hours. But having received frequent applications for the instrument, I have made arrangements for furnishing as many as may be required. The price of the glasses, exclusive of the frame, is *thirty five* dollars. The frame, according to the pleasure of the purchaser, will cost from five to thirty dollars. To have an idea of it, you have only to imagine a mahogany table about two feet square, which may be made a very handsome piece of furniture. A neat mahogany case, with a top shutting down to protect the glasses, would cost about ten dollars.

Every instrument is tuned according to a scale I keep with me, and numbered accordingly. Should a glass be lost, it is only necessary to acquaint me with the number of the instrument and name of the note, and it will be replaced immediately, for which two dollars is charged. This is the whole expense of keeping it in repair, for otherwise it is never out of order, but always in tune. A Book of Instructions, with some favourite music, accompanies each instrument. Persons residing in Baltimore, or its vicinity, may obtain further information on application to Edward J. Coale, where orders will be received—or address a line to me at Eastville, Northampton, Virginia.

FRANCIS H. SMITH.

P. S. I should have observed, that the goblets are made with a stem an inch or two long, by which they are fixed into the sounding board, wherein are holes to receive them.

SPORTING OLIO.



CORRECT PORTRAIT AND MEMOIR OF THE CELEBRATED GODOLPHIN ARABIAN.

The GODOLPHIN ARABIAN was imported into this country [England,] about five-and-twenty years after the Darley Arabian. They were the most celebrated and valuable for their blood and high form, as stallions, which have yet appeared, and are the source of our present best racing blood. There are sufficient reasons, however, for the supposition, that Lord Godolphin's horse was in reality a *Barb*. The public has been in constant possession of the true *portraiture* of this famous horse, so remarkable and striking in his form; which is not the case, to the regret of all true sportsmen, with respect to the

Darley Arabian, of which there now exists, if it yet do exist, but the solitary original picture, at the old mansion of Mr. Darley; the present possessor having, it is reported, returned no answer to an application some years since, for leave to take an engraving of it for the public satisfaction.

The portrait which accompanies the present description, was taken by the late celebrated Stubbs, from an original by a French artist, now in the possession of Lord Francis Godolphin Osborne, at his seat at Gogmagog Hills. Another, and probably an earlier drawing, was made from the life, by Sey-

mour, the most reputed horse painter of his time. Stubbs' picture gave rise to some unfavourable criticisms by his brother artists, in respect that the elevation of the horse's crest was excessive, indeed, totally out of nature; and it was boldly asserted at Stubbs' sale, that the painter must have drawn upon his imagination, in order to deck out a horse with such a lofty and swelling forehead. A well known writer on these subjects, however, has since made an effectual, because practical defence for Stubbs and the original draughtsman. This writer states, that he pointed out to the late Mr. Tattersall and several other gentlemen, a horse, the property of the Duke of Portland, with a crest acknowledged by them, to be full as lofty and extensive as that appears in the portrait of the Godolphin Arabian. The late Rev. Mr. Chafin also, who saw the Arabian frequently in 1751-2, vouches for the correctness of Stubbs' picture.

This Arabian was fifteen hands in height, of great substance, of the truest conformation for strength and action, bearing every indication of a real coursier—a horse of the desert. His colour was entire brown bay, with mottles on the buttocks and crest, excepting a small streak of white upon the hinder heels. He was imported into France from some capital or royal stud in Barbary, whence it was suspected he was stolen, and said to have been foaled in 1724. So little was he valued in France, that he was actually employed in the drudgery of drawing a cart in the streets of Paris. Mr. Coke brought him over from France, and gave him to Williams, master of the St. James' Coffee House, who presented him to the Earl Godolphin. During the years 1730 and 1731, the Arabian served in that noble sportsman's stud as teaser to his stallion Hobgoblin, which horse refusing to cover Roxana, she was in consequence put to the Arabian, and produced a colt foal, the famous LATH, the most elegant and beautiful, as well as the best racer of his time. The mutual attachment between the Godolphin Arabian and a stable cat, is well known. He died in 1753, the most successful as a stallion of any foreign horse, before or since imported.

CURE FOR THE SORE TONGUE IN HORSES.

J. S. SKINNER, Esq. Philadelphia, Nov. 25, 1826.

Sir,—Having observed by one of the Philadelphia papers, that Dr. Spence had addressed to you a letter on the subject of a destructive disease that prevails at present among the horses in Maryland, viz: ulcerated tongue.

This is to inform you that some years back, when I resided in the State of Mississippi, the same disease attacked and carried off many fine horses; it was there called the sore tongue. A remedy was found, by taking one quarter of an ounce of the sulphate of zinc, or white vitriol, and dissolving it in one porter bottle of water, and washing the tongue three, four, or five times in the course of two days. Indeed it seldom failed, particularly if used early; it seemed to check the disease immediately; the horse would at first nibble delicately, and shortly after, eat as usual. A drench of one pound of salts, given quickly, aids the cure.

Respectfully yours, &c.

WILLIAM E. LEHMAN.

N. B.—My impression is, that alum water was used with success also. One ounce of alum, dissolved in a bottle of water, and the tongue washed well, by taking a rag wet with the solution, introducing it into the mouth and rubbing well over and about the tongue.

CURE FOR THE SORE MOUTH IN HORSES.

Lancaster, Penn. November 23, 1826.

The following method of practice and recipe for the cure of the prevailing disease among horses,

called *sore mouth*, was obtained from Mr. Tomlinson, (one of the proprietors of the Western Mail Stages) on his return from visiting the sick horses in the line, and I am authorised to say, will, if strictly attended to, succeed in curing 99 cases in 100; by inserting it you will oblige
MANY.

RECIPE.

On the commencement of the disease, bleed moderately. If the blood, after cooling, appears to have much buff on it, repeat the bleeding; give a pint of castor oil; if it does not operate in 16 hours, give two thirds of a pint. Nitre may be given at the rate of 2 oz. a day, or salts two or three times a week, 4 lb. at a time; these may be given in a thin mush, or rather slop of bran, it being the best food for the animal while diseased.

Take half a pint of honey, one table spoon full of borax, and one quart of strong sage tea, mix them well together, then take a stick and tie a soft rag to the end of it; dip it in the mixture and wash the tongue, gums and mouth well; the more frequent the better, at least every two hours—sweet milk in the tea will do no harm, or a little nitre may occasionally be put in with good effect—be particular in keeping the mouth clean, and nursing the horse with care.

The pulse, and appearance of the blood, must govern as to the necessity of bleeding more than once.

MISCELLANEOUS.

NATURAL HISTORY.

In reading the first volume of Dr. Godman's *American Natural History*, we were struck with the following among other curious passages.

[Nat. Gaz.]

"We have alluded to the sporting of the *Otter*, and may now remark that its disposition in this respect is singular and interesting. Their favourite sport is sliding, and for this purpose in winter the highest ridge of snow is selected, to the top of which the otters scramble, where, lying on the belly, with the fore feet bent backwards, they give themselves an impulse with the hind legs, and swiftly glide head foremost down the declivity, sometimes for the distance of twenty yards. This sport they continue apparently with the keenest enjoyment, until fatigue or hunger induces them to desist. In the summer this amusement is obtained by selecting a spot where the river bank is sloping, has a clayey soil, and the water at its base is of a considerable depth. The Otters then remove from the surface, for the breadth of several feet, the sticks, roots, stones, and other obstructions, and render the surface as level as possible. They climb up the bank at a less precipitous spot, and starting from the top slip with velocity over the inclining ground, and plump into the water to a depth proportioned to their weight and rapidity of motion. After a few slides and plunges, the surface of the clay becomes very smooth and slippery, and the rapid succession of the sliders show how much these animals are delighted by the game, as well as how capable they are of performing actions, which have hitherto been considered as impossible or diversion."

Shrew mole
a day, and
particularly busy in repairing
ies; and in long continued
not they seek the high grounds for
decision with which they
it twelve o'clock
known in the
have watched
twelve, and at this
-king them alive, when
their progress with
and throwing

imals do not appear to be well suited for living in the open air, especially if it be somewhat cool; for, after being a few minutes exposed, we have always observed them to shiver, as if from the change of temperature.

"That an animal of this kind should be domesticated with facility, would seem hardly possible, yet our friend, Titian Peale, tamed a very fine one which he caught while we were together examining their modes of burrowing. This shrew mole is kept in a box containing some loose earth and dried grass for his bed; he eats considerable quantities of fresh meat, either cooked or raw, drinks freely, and is remarkably lively and playful, following the hand of the feeder by the scent—burrowing for a short distance in the loose earth, and, after making a small circle, returning for more food. When engaged in eating, he employs his flexible snout in a singular manner to thrust the food in his mouth, doubling it under so as to force it directly backwards. When he has obtained one piece of meat, he will not relinquish it even for the sake of earth worms or other favourite food; he is also fond of burying himself when he has received any thing, in order to eat it undisturbed."

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 1, 1826.

✶The next meeting of the Board of Trustees of the MARYLAND AGRICULTURAL SOCIETY will be held at the town residence of Mr. James Swan, on Thursday, the 7th of December. A full and early meeting is desirable, that the scheme of premiums may be finally decided upon.

✶ALDERNEY CATTLE.—It will be seen by the advertisement of Messrs. Jennings & Thomas, that an opportunity will occur on the 9th inst., for those who may desire it, to supply themselves with individuals of the Alderney breed of cattle—so remarkable for the rich colour and quality of its milk.

✶WANTED, for distribution—some seed of the early black seed cotton, which has been raised in Maryland.

SUPERIOR ALDERNEY CATTLE,

FOR SALE AT PUBLIC AUCTION.

Will be sold on Saturday, the 9th of December, (inst.) at 12 o'clock, at the Rising Sun Tavern, on the Germantown road, in the county of Philadelphia, kept by Jacob Billger, a stock of 15 head of ALDERNEY CATTLE, consisting of Cows, Bulls and Calves, of different ages; they are of the original stock imported in the year 1816, by M. Wurts, and the utmost care has been observed to preserve the blood pure and free from mixture. The beauty and superior excellence of the Alderney cow for the dairy, is so well established, that no remark on that head is deemed necessary. This stock will be found well worth the attention of those who are desirous of improving their breed of cattle, and they will be sold without reserve, to the highest bidder. Catalogues may be had at the Auction Store, No. 36 North Front-street, or at the Rising Sun Tavern, where the cattle may be seen two days previous to the sale.

JENNINGS & THOMAS,

Dec. 1, 1826.

Auctioneers.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	6	10	9	12
BEES-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16 1/2	17	20	22
Havana,	—	14	17		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . .	—	10	12		
COTTON YARN, No. 10,	—	28	30		
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	14	16	18
Dipt,	—	11	12		14
CHEESE,	—	8 1/2	12	12	15
FEATHERS, Live, . .	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 3/4			
Shad, trimmed, . .	—	5 50	6 00		
FLAXSEED,	bush	80			
FLOUR, Superfine, city,	bbl.	5 12		5 25	6 25
Fine,	—	4 75			
Susquehanna, superfi.	—				note
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	55	56		
white	—	55	56		
Wheat, Family Flour,	—	1 05	1 12 1/2		
do. Lawler, & Red, new	—	1 05	1 06		
do. Red, Susque. . .	—	1 00	1 06		
Rye,	—	75			
Barley, Eastern . . .	—	1 22	1 25		
Do. country	—	90	1 00		
Clover Seed, Red . .	bush	4 50		5 00	
Ruta Baga Seed, . .	lb.	87	1 00		
Orchard Grass Seed,	bush	3 00		3 50	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	4 00		4 50	
Oats,	—	48	50		
Beans, White,	—	1 25	1 50	1 87	
HEMP, Russia, clean, .	ton	205	245		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	20			
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	6 1/2			
Bar	—	7 1/2			
LEATHER, Soal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	46	50	62 1/2	75
Havana, 1st qual. . .	—	30	32	37 1/2	
NAILS, 6a20d.	lb.	6 1/2		9	
NAVAL STORES, Tar,	bbl.	1 50	1 62 1/2		
Pitch,	—	2			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	30	32	40	
Spermaceti, winter .	—	80	85	88	
PORK, Baltimore Mess,	bbl.	11 00			
do. Prime,	—	8 00	8 50		
PLASTER, cargo price,	ton.	3 50	3 62 1/2		
ground,	bbl.	1 50			
RICE, fresh,	lb.	3 1/2	4	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5 1/2	8	10	12
WHISKEY, 1st proof, .	gal.	36	38	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	29	30	50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	10 50	10 75		
Louisiana,	—	9 75	10 00	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	
Pepper,	—	16		25	
SALT, St. Ubes, . . .	bush	43		75	
Liverpool ground . .	—	48		75	
SHOT, Balt. all sizes, .	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	
do. Sicily,	—	1 10	1 15	1 50	
Lisbon,	—	1 05	1 10	1 50	
Port, first quality, . .	gal.	1 65	1 85		
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinners' or Pulled, .	—	20	25		from tag.

Printed every Friday, at \$5 per annum, for JOHN KINNER, Editor, by JOHN D. TOV, corner of and Market streets, where every description of and Job Printing is handsomely executed.

AGRICULTURE.

CURWEN IN REPLY TO COLUMELLA
ON "THE MODUS OPERANDI"

"As the MODUS OPERANDI OF NATURE IN PRODUCING AND DISPOSING OF THIS SECRETION IS NOT BEEN EXPLAINED, it is not known," says Columella, "what EFFECT it has upon the quality of the wool."

Will any man contend, that because "the *modus operandi* of nature in producing cannot be explained," that therefore the EFFECTS cannot be known? Can Columella explain the *modus operandi* of nature in producing the oak from the acorn—the smallest atom—or even himself? Or will he deny that acorns produce oaks, or that children are born? When he eats, drinks, and prepares to sleep, does he wait for the exposition of "the *modus operandi* of nature?" Would he have us cease to sow our seed—to engraft our trees—to cross our flocks—because the *modus operandi* of nature cannot be explained? Will any "chemico-physiologist" venture to deny that which his senses can perfectly comprehend, but which nature has not chosen, it her "economy" to expound?

When an "anonymous" writer commences in attack upon the opinions of a man, whom he denounces in proper person, as "speculative," and whom he would endeavour to make appear absurd—when he makes round assertions without facts, and founds arguments upon assumptions in direct opposition to that which has been said, it is vain that he should expect his questions to be answered—his positions to be met by "explanation of difficulties" entirely his own—or that his facetious and quaint mode of illustration should be regarded throughout.

We had no hope that Columella would be corrected—no desire to "controvert" his positions, except as they may bear publicly upon our own. And in order to shew how far "every thing has been given up"—how entirely we have supported all which we had said—and how much he has wounded—we refer, although most reluctantly, to the annexed quotations to prove.

But lest the friendly Editor should think that "exception might be taken" at seeming neglect of a "fair and friendly discussion," we shall endeavour to shew, that Columella's argument upon his favorite theme, the unhappy woolstapler, has not been sustained.

He continues—"let Mr. L. speak for me." It would have been well, had Columella allowed Mr. L. and even his own authorities to speak for themselves.

We had given Luccock among sixteen authorities. His work is entitled—"An Essay on Wool, containing a particular account of the English fleece, with hints—" by John Luccock, Woolstapler, Leeds, 1809." We have always called him a woolstapler, and we are not aware that his having been "unacquainted with the rudiments of FARMING," can militate against his facts—his knowledge of wool, which it is his business to handle, and upon which his daily bread must depend. We would ask, if Luccock were a manufacturer, or even a farmer, and had a flock of sheep, deficient in yolk, would there not be more probability of his deciding, as an adroit politician, in favour of sheep which had not yolk, than if, as a woolstapler, he were confined in his dealings to his business alone.

"This point being settled, the next inquiry is, had Mr. Luccock ever seen a Merino sheep?"

We are conscious that this theme has lost its "point," but in imitation of Columella, we will follow the argument. He proceeds—"Luccock does not speak of any other race of sheep, possessing the above remarkable properties, but he does speak of Merinoes, as having this quality." THIS WE DENY. Let Columella speak, not for us, nor for Luccock, but for himself, in drawing this inference." He

quotes Luccock, page 108—"There are fleeces, we are told, so uniformly alike through the whole extent, that persons accustomed to observe wool, and even manufacturers, have not been able to distinguish any difference in the fineness of the pile" * * "such is the description," says Luccock, "which Dr. Parry gives us of his new breed of sheep, obtained by combining the blood of the Spanish, with that of the RYELAND race."

Upon this Columella rejoins, "it is obvious Mr. L. had not seen Dr. Parry's sheep, then the principal MERINO flock in England, and the inference is fair, that he had not seen the pure Merinoes." * * *

Has not Columella just proved that Luccock had said, Dr. Parry's new breed of sheep, obtained by combining the blood of the Spanish with that of the Ryeland race, were the sheep which he had not seen?

Is it possible he does not know, that a "new breed" cannot be the old breed, and that animals obtained by combining the blood of the Spanish, with that of the "Ryeland race," could not be Merino sheep?

But if Luccock had not seen the Merino sheep possessed by Dr. Parry, the one living in the north, the other in the west of England, would it follow that Luccock "HAD NOT SEEN A MERINO SHEEP?"

But Columella says that Dr. Parry had the principal flock. If this were not the reverse of the fact, would it follow, that because Luccock had not seen "the principal flock," that therefore he had not seen small flocks, or many large flocks of Merino sheep?

Columella has given an extract from Sir Joseph Banks' Reports of the King's flock, which might have informed him, that it was established in the year 1788—that in 1792 it was enlarged by importations—that in the year 1808, seventeen hundred and eighty-seven Merinoes of the famed Paular flock were received, as a national gift from the Spaniards and their King, to the British Monarch and his Ministers—that "more than 100 rams and some ewes" had been gratuitously distributed in England—that in 1804, public sales were held, and annually continued. Luccock's book appeared in 1809, twenty-one years after the Royal Flock had been established.

Will Columella allow us to remind him that in September last he asserted Dr. Parry "had procured a few full blood Merinoes from the King's flock"—forty-nine days afterwards he as positively asserts that Dr. Parry's sheep were "the PRINCIPAL Merino flock in England."

As we are "taught" by him, that "truth is not always best discovered by a reliance upon authority," we must have recourse to argument upon his facts.

Thus as the relation of a "few sheep" bears to 1787, so does the relation of Columella's first assertion bear to his last, or that which he now gives as the truth.

Are there not at least 1787 chances to one, that he has been once wrong? Lord Somerville, Mr. Tollet, Gen. Robertson, Sir James Montgomery, Mr. Young, had flocks of Merinoes, and some of them held annual sales. Is it not to be presumed that English gold and British influence with the Spanish Court, and English breeders, and English "GRAZERS" (if Columella think "graziers" are the best judges of wool,) and Spaniards, and the King of Spain, were as likely to obtain pure Merinoes as commercial speculators or manufacturers, who have stocked our country, in nine instances out of ten, with sheep of base blood.

And is it not probable, that a woolstapler, in Yorkshire, would have as large means of information upon wool, as somebody withholding his name—despising authority—displaying the result of his "own observation," and the notions which he had gathered at a vendue in New York. How can we know that this somebody is not unacquainted with the rudiments of farming or breeding? He may be a woolstapler for aught that appears.

We set out with the determination to defend Mr. Powell's opinions which Columella had condemned—to establish the positions at which he had sneered as absurd. Mr. Powell, (American Farmer, Dec. 23, 1825,) in a notice on the characteristic marks and properties of various families of sheep, said—"The sheep which produce the finest fleeces, are not necessarily the best to form a breeding flock. If their constitutions be not good—if their forms be bad, the secretion of yolk which is essential for the support of the fleece, must be small; the offspring consequently will be a degenerate race."

One sentence, incidentally mentioning yolk, has given Columella occasion to keep up, during ten months, this "discussion," touching merely two of our sixteen authorities, and quarrelling sometimes with his own.*

Page 210, he quoted Sir George McKenzie; but page 267, he denies him experience, and would, if he could, make him appear absurd.

"Neither woolly heads, nor dewlaps" had been mentioned by Mr. Powell. The reader will decide, who "raised a man of straw."

But if Columella had proved, that Luccock had never seen a Merino sheep, how would this bear upon the question of yolk? Does not the fleece carry the yolk with it, until it has been subjected to a difficult and tedious process? He must prove that Luccock had never seen unwashed Merino wool, to make out his case upon yolk in Merino wool. If he should attempt to prove, that the Merinoes, which John Bull had selected, produced no wool, or that the King of Spain presented bad sheep as a national gift, we will then state how many Merinoes we saw in England, at the time Luccock's book appeared, infinitely superior to any within five-and-twenty miles of this spot.

But if Luccock had never seen Merino wool, it could not invalidate his testimony in regard to the effects of yolk upon wool generally. We are aware that Columella would confine us to the propagation of Merinoes alone; but that stupid fellow for whom Luccock wrote—John Bull—likes good mutton as well as fine clothes. He is not satisfied merely with supplying "the luxuries of the rich;" and however ignorant of the "*modus operandi*," requires blankets and flesh to supply the cravings of nature, and to keep himself warm.

Columella says—"Dr. Parry asserts in one of his papers, that he had never selected a breeding ram or ewe, on account of any other quality than the fineness of the fleece." If he had read Parry, he would have found that he had said—"As it happens that THE FINEST FLEECES have usually the greatest quantity of yolk, we may in unwashed sheep, living together, of the same age, and at the same season, form a tolerably accurate conclusion as to the FINENESS OF THE WOOL, from the degree of DARKNESS ON ITS SURFACE, WHICH IS ALSO GREATEST ON THE FINEST PART OF THE FLEECE, as on the neck, shoulders, and sides."

Therefore, when Parry selected THE FINEST FLEECES, he selected those which had usually the most yolk; he had observed—"in forming my own flock, my view has certainly been, to place THE FINEST WOOL ON THE BEST CARCASS."

We beg Columella to be assured, that we neither desired nor expected to draw forth his name. We but objected to anonymous productions, being brought to establish "speculative facts," by a gentleman, who condemns "reliance upon authority,"

* "Another authority is Sir George McKenzie, who has compiled some useful hints on sheep; but when he tells us that "ordinary sheep naturally shed their wool annually," I want no other evidence of his total want of close observation and experience, on the simplest properties of the animal he undertook to write about." [Columella, Amer. Far., Nov. 10, 1826.]

Let COLUMELLA prove that Sir George McKenzie is not right.

yet gives opinions HE has gathered from UNKNOWN persons at a vendue.

He contends (American Farmer, Dec. 30, 1825,) that Southdown "wool is not very visibly finer than that of the better kind of common sheep"—yet he now asks—"if yolk is necessary to the growth of fine wool, and the finest fleeces have usually the greatest quantity of it, how does it happen that Southdowns, and several other breeds, have as fine, or finer wool than half blood Merinoes, while the latter secrete a much greater quantity of yolk?"

This happens to be a mistake.

Protesting that we have no intention to be "disrespectful," we hope, after all Columella's fun, he will allow us to tell a story, in humble imitation of his style.

A certain grave philosopher, having made the "admirable discovery," that when a fish was added to water in a vase, the weight of the whole was not augmented called upon the Royal Society to expound the "*modus operandi*." After mature advisement, and the most profound and elaborate research, to give "explanation of the difficulty," which this odd fish had suggested, an old fashioned fellow, more wily than the rest, exclaimed, stop—bring me the weights; when behold! it appeared the wrong vase had been weighed. Thus they voted their comrade a bore, and burned their minutes of the night.

CURWEN.

Powellton, Nov. 5, 1826.

[The quotations alluded to in the above are deferred until our next number]

PREMIUMS WORTH CONTENDING FOR.

MR. SKINNER,

Will you have the goodness to publish the following scheme of premiums, offered to every renter of land, by the trustees of the Maryland Agricultural Society for the Eastern Shore

Manure is the basis of all advantageous agriculture. The land renters stand most in need of encouragement, and our rented lands of the aid of this stimulus. Therefore, as one of the best means of promoting the interest of this valuable class of our citizens, and of increasing the quantity and improving the quality of all our staple productions, the Board of Trustees of the Maryland Agricultural Society for the Eastern Shore, offer the following premiums to the whole body of land renters.

A premium of \$50, to be awarded to the tenant of any rented land or farm on the Eastern Shore of Maryland, who, according to his means and resources, shall put out thereon the greatest quantity of manure, between the 15th day of January, 1827, and the last day of September, following.

A premium of \$30 to the tenant who shall put out the next, or second greatest quantity, and

A premium of \$20 to the tenant who shall put out the third greatest quantity of manure, within the periods above mentioned

These premiums will be severally awarded and delivered to the successful competitors, on the last day of the next cattle show, to be held at Easton, in November, 1827.

Resolved, That the following gentlemen be, and they are hereby appointed and constituted a committee in, and for each of the several counties respectively, to receive the names of competitors; to view any work that shall be done, when requested so to do; and to receive and forward the vouchers of each competitor, to the Secretary of the Board of Trustees of the Maryland Agricultural Society for the Eastern Shore, on or before the 15th day of October, 1827.—to wit:

For Cecil County.—Benjamin F. Mackall, Esq.; Washington Hall, Esq.; William D. Mercer, Esq.

For Kent County.—Geo. W. Thomas, Esq.; the Hon. Ezekiel F. Chambers; Thomas Gale, Esq.

For Queen Anne's County.—Col. Thomas Emory; Col. John Tilghman; William Y. Burke, Esq.

For Caroline County.—General William Potter, John Boon, Esq.; William M. Hardcastle, Esq.

For Dorchester County.—Joseph E. Muse, Esq.; Doctor Woolford; Johns Henry, Esq.

For Somerset County.—Littleton Dennis, Esq.; Thomas K. Carroll, Esq.; John P. Gale, Esq.

For Worcester County.—Zadok Purnell, Esq.; John U. Dennis, Esq.; Doctor Spence.

Resolved, That Tench Tilghman, Robt. H. Goldsborough, and Robert Banning, be the committee for Talbot county; who shall also prepare the terms and rules under which the competitors shall contend for the above premiums, and shall forthwith forward them, and these proceedings and resolutions to the committees in the other counties; and shall also request their publication in the American Farmer, and in every paper on the Eastern Shore of Maryland.

By order of the Trustees of the Maryland Agricultural Society of the Eastern Shore of Maryland.

NICHOLAS HAMMOND, Pres't.

Attest. ROBERT BANNING, Sec'y.

N. B.—The several committees are requested to consider the publication of these proceedings as full evidence of their appointments, and are earnestly solicited to meet immediately, and to devise and adopt the best means of exciting the attention of the land renters to these handsome premiums, and of carrying into efficient operation the views of the trustees.

NOTE.—All matter and substances which will improve and increase the crops of corn, wheat, or tobacco—as lime, and calcareous matter in its various forms of shell marle, oyster shells, &c. &c. &c.; sea-ouse, or salt grasses; marsh, salt or fresh; the alluvial soil collected in the heads of all drains and valleys; rich swamp earth; beds of old fences; clays carried and applied to light soils; rich light soils carried and applied to stiff, heavy clay lands, &c. &c. &c. as well as the manure from the farm yard and compost heaps, will be considered and counted as manure.

The trustees would be highly gratified by such details in the reports of competitors, as would enable them to award the meed of praise to enterprise in discovering and developing new and hidden resources for enriching our soils; and to judgment and skill, displayed in collecting, combining, and applying all the various matters and substances, convertible into fertilizing manures.

The competitors will be governed by the following brief directions.

Every person intending to contend for either of the manuring premiums, will signify his intention in writing to one of the committee of his county, before the 15th day of January next; and he will then, or as soon thereafter as may be, state the quantity of ground, or the number of corn-hills, with the distances between the hills; and the quantity of fallow and tobacco ground, if any, which he means to cultivate in 1827. Also his force of hands, horses, mules, or oxen, and the number of his carts.

Every competitor must keep a regular account of the number of loads, and kinds of substances, he hauls into the farm yard, or to compost heaps, or out on his land, with the average distances of the hauling. The quantity hauled at a load must be ascertained by gauging the cart body, or by measuring the number of bushels contained in an average load, and gauging others of the like substances by it. And whenever any quantity has been hauled, or a piece of manuring completed, which can be inspected, a neighbour of character, or one of the committee, should be called on to view the work, and assist in taking an account of the quantity.

Respectable certificates will form the best vouchers, as far as they can be obtained. Competitors

will also be required to give in an account and statement of their work, under oath; because, in the general account of the quantity of ground they cultivate, of their force, of the number and size of the loads of litter, &c. hauled into the farm-yard, or to compost heaps, &c. &c., their own statements must be taken

The account and vouchers of every competitor must be placed in the hands of the first named of their respective committee, on or before the 10th day of October, 1827.

TENCH TILGHMAN,
ROBERT H. GOLDSBOROUGH,
ROBERT BANNING.

P. S.—The editor of every paper published on the Eastern Shore of Maryland, is respectfully requested to copy the above proceedings in full, and to give them an immediate insertion in their respective papers.

ON THE SELECTION OF SEED CORN.

DEAR SIR,

November 25, 1826.

Now is the time for those who may not be doing gathering corn to select their seed ears. It has long been the judicious practice of many farmers within my knowledge, to select their seed corn from the best bearing stalks. Many other farmers consider this practice as idle, and some sneer at it; but they only betray their own want of observation; every attentive gardener is well aware of the advantage of selecting the best seeds—and how many farmers are constantly in quest of the best variety of wheat. Now, of all the grains we know of, corn mixes its kinds with the greatest facility. The natural effect of this is, that the varieties of corn are almost infinite—and hence the need for selecting your seed corn is vastly greater, and more palpably manifest, than for selecting any other seed grain.

Those who sneer at a farmer for selecting his seed corn, must be under the impression, that the corn in a field is all of precisely the same kind, and that one stalk's bearing three ears, another two, and a third but one, is the mere effect of accident. But this cannot be the fact. In passing through a poor part of my field the other day, I was struck with a stalk, and upon examination found five good ears on it. I looked to the next hill—there were two stalks—one had one ear, the other none. I examined many hills round—I found most of the stalks with one good ear, several with two, and one or two with three; but this single stalk, though not larger, had more ears on it than any hill near it, where there was either one, or two, or three stalks in the hill. Now, sir, this could not be the effect of accident; it must be the effect of breed. I do not believe that you can find a corn field in which there are not twenty different kinds of corn, mixed in endless shades and degrees. What a field then is here every where open to select a choice from. You plant from a stalk that has borne you three ears, it will be most likely to bring you such bearing stalks; not from accident, but because it is natural for like to beget like, and for seed to produce its own kind. I heard a farmer say, the first year he thus selected his seed corn, he produced an increase of twenty per cent., or twenty bushels in every hundred of his crop. The second year the increase from the second selection was not so manifest, nor so great; but his crop still improved; and when he went into his field to gather his seed, after three years previous careful selection, he asserted to me, that he found more stalks bearing three ears than he could find of stalks bearing two ears the first season he began to make the selection.

CORNUCOPIA.

DEAR SIR,

Edisto Island, S. C. Nov. 20, 1826.

It will be recollected, that last year I addressed you on the relative value of seed from the but end,

middle, and point, or small end, of corn. You will also remember, that the result of my experiment seemed to indicate the superior productiveness of the grains from the point. I have since tested the experiment on a larger scale. I selected three contiguous acres of poor land, and planted every alternate half acre with seed from the three artificial divisions of the ear. When the crop was harvested, the product of each acre, on measurement, was found to be as follows, viz.

	B.	P.	Q.
Point, or small end, -	8	3	2
Middle, - - -	10	1	6
But end, - - -	11	0	4

It would thus appear, that the ascendant generative power of the small end of corn has not been established. One fact, however, has been fully confirmed, to wit, that the seed from the but end is decidedly more productive than that from the middle. In the first experiment, the advantage of the former over the latter, in a half acre, was one peck and one quart; in this instance, two pecks and six quarts. To this result, as exemplified in two fairly tested experiments, our practice, so far from having conformed, has hitherto been in direct opposition, and hence obviously to the impairment of our interest.

Respectfully, yours,

WHITEMARSH B. SEABROOK.

WOOL.

Extract of a recent letter, from a respectable gentleman in Ohio.

I had noticed that meetings had been held in your quarter by the woollen fabricators. I regret their distress, and really consider it a great calamity, should their operations cease. I think, however, correct policy would oppose the reduction of the duty on wool, for I believe the United States capable of producing sufficient for all demands in quantity, quality, and price. Such I believe to be the prevailing opinion in Ohio and Pennsylvania, and west of us. A proposition to reduce a duty which is daily increasing our flocks and affording our farmers some faint glimmering of being able to produce some marketable commodity, would alarm us much.

We think it not advisable to undertake any general revision of the Tariff; more we admit is due to Woollen Manufactures, and more we are willing to give.

(Phil. paper.)

HORTICULTURE.

(From the Technical Repository.)

OBSERVATIONS ON THE CULTURE OF SILK.

By the late Archibald Stephenson, Esq., of Mongreeman, in Ayrshire.

(Continued from page 292.)

On putting the eggs into these packets, increase the heat to 144 degrees of the thermometer, and keep up that heat night and day, as equally as possible; for which purpose, have a couple of thermometers in your room for your direction. After the eggs have remained in the little packets for three or four days, increase the heat to 15 degrees; and in four days more, if the weather seems settled and very promising, increase the heat gradually to 16 degrees, visiting and turning the eggs from time to time as before.

When the eggs begin to turn white, and the mulberry trees are so far advanced as to be out of danger from cold winds, or slight degrees of frost, increase the heat gradually to 174 degrees, or 18 degrees at most, to quicken the hatching of your eggs, and to make the worms come out as nearly at

the same time as possible. But never increase the heat to more than 18 degrees, because a greater heat never fails to push the worms too fast, and to render them red at their first coming out.

When the worms are red at their first coming out, it is a sign the eggs have either been bad, or ill kept over winter, or over heated; that is, too much forced when laid to hatch. Worms of this colour are good for nothing, and are therefore to be thrown away, to avoid the expense of feeding them, since they will never produce cocoons.

When the worms are entirely black, upon their first appearance, it is a sign of their having been perfectly well managed, which gives great hopes of success.

When the eggs first begin to take a white colour, put them into little chip boxes, and cover each box with a bit of clean white paper, pricked with many little holes in it, to allow the worms to come through, taking care to inspect and shake the eggs from time to time in the boxes, that they may have equal access to the heat; and when the worms are ready to appear, put a few mulberry leaves upon the paper, to which the worms will readily attach themselves as they come out; and, by means of the leaves, you can easily take out the worms as they appear, in order to put them into different little boxes, and then give them some of the tenderest leaves, cut into small pieces, to feed on, giving them at the rate of three meals each day.

As the leaves when very young will dry so much, even in an hour's time, if exposed to the open air, as to be unfit for the use of the young worms, you must put them into a clean glazed pot; but take care to place them loose, that they may not press too much upon each other; cover the head of the pot with a wet linen cloth, and place the pot in a vault or cellar, or, in case you have none, into the coolest part of your house; by which means the leaves will keep fresh and good for two or three days together. Besides, you must take care to have always in the house at a time, a stock of leaves sufficient at least for three days' provision for your worms, to secure you in food for them during such length of time, in case of wet weather; as nothing is more pernicious to the worms than giving them wet leaves for their food; for which reason be careful never to pull the leaves when wet, either with rain or dew, except on absolute necessity; and in that case you must spread them out, and turn them, from time to time, with a long wooden fork, that the leaves may be perfectly dry before you give them to the worms.

It may be here added, that it is the general opinion in France, that the leaves afford a more wholesome food for the worms when they have been gathered four or five hours fresh from the tree; and more particularly so if the trees grow upon any soil other than sand or gravel; because the keeping them so long so far diminishes the over-richness of the leaf. The persons employed in pulling the leaves must be careful to have their hands clean, and free from every strong offensive smell, such as that of garlick, onions, or tobacco, &c.; and they ought to be particularly attentive not to bruise the leaves in pulling them.

When your worms are first hatched, keep each day's production separate by themselves, as it is of high consequence to have each parcel brought up as equal as possible, that all the worms contained in it may be in readiness to mount for making their cocoons at one and the same time. After setting apart separately the production of each of the first four days, what then remains of the eggs to be hatched may be thrown away, as these later worms are always found to be weakly, few of them completing their cocoons; so that the attempt to rear them is always attended with an unnecessary waste of leaves, besides the trouble they occasion to no purpose.

When the worms are just come out, keep them in a heat not exceeding 15 degrees; and even then there is no occasion to cover them by putting on the heads of the boxes, as it is better for the worms to have abundance of free air. But if the weather should happen to prove cold, you must in that case put on the heads of the boxes at night, or cover them with a double napkin, taking care, however, not to let it touch the worms, for fear of hurting them, and take off the head of the box or napkin in the morning, when you give a feed to the worms, as early as you can, at four or five o'clock, but not later than the last. In that early state, the three different meals should be given to the worms at the distance of six hours from each other.

When the worms are coming out they are not to be left scarce a moment, as they ought to be gathered from the boxes as fast as they make their appearance; and as this work goes on in the night as well as day, it becomes a very hard task at that time. Monsieur Marteloy, the gentleman already mentioned, who always carefully attended to this particular himself, generally went to bed at nine o'clock in the evening, during this critical period, and got up again at midnight, which was quitting them as little as possible. But this great attention at this time is only requisite in large operations; for example, a pound of eggs, or any quantity above it.

The stage ought to be erected in a large room, with windows on each side of it, so as to be able to command a thorough air when necessary. The walls and floor of which should be examined with the strictest attention, in order to fill up every little hole or crevice that can give access either to rats or mice, as both these animals eagerly devour the silk worms, whenever they can find an opportunity for that purpose.

In Languedoc and Querry they make the stage six feet, but more frequently only four feet and a half broad, so that a person, by going first to the one side, and afterwards to the other, may be able with ease to reach over the whole breadth, both for the advantage of giving the leaves to the worms, and for clearing away their litter more easily. At every nine feet distance in the length of the stage, they fix a post in the floor, of a height sufficient to support the roof, and to those posts they nail a piece of wood across the stage, which piece of wood serves to support the baskets to be hereafter mentioned, which rest upon the cross bars of wood at the two ends: so that these bars ought to be four inches broad, which allows two inches for each basket to rest on, as the baskets join the one to the other at the cross bars. The stage being four feet and a half broad, takes two of these baskets to fill up its breadth. They make their stage to consist of as many shelves as the height will admit of, keeping them at the distance of twenty inches from each other. The lowest table or shelf ought to be made six inches broader than the shelf immediately above it, that the lowest may project three inches on each side further than the one above it; and so in proportion with all the other tables or shelves; the uses for making this difference of breadth in the different shelves, shall be afterwards particularly explained.

It has been already observed that rats and mice are extremely destructive to the silk worms when they can get access to them; for which reason every precaution should be used to protect them against such dangerous visitors. For this purpose, therefore, the following one is generally attended to. They cover the foot of each of the posts of wood which support the stage with a piece of strong smooth paper, which is nailed to the wood with tacks, to the height of a foot above the floor, by which means, when these vermin attempt to mount, their feet slide upon the paper, so that they can no hold. A hoop of glass of the same height,

of a size proper for the wood, might, perhaps, be found to answer the purpose better, though I was assured the paper had the full effect for which it was intended. The ant, or pismire, is also a most dangerous enemy to the silk worms; to guard them from which, the usual practice, where there is any danger from these insects, is to put a quantity of hot lime round the foot of each of the posts which support the stage, which fully answers for that purpose. Cats and poultry of all kinds are likewise destructive to the worms, and must therefore also be guarded against with care.

When the worms are young, they are put into wicker baskets, three feet long and eighteen inches broad, the edges or sides of which are made from two to three inches high. They make them of that size in order to be the more portable.

When the worms come to be placed upon the stage, they are put into baskets four feet and a half long, and two feet three inches broad, and the sides or edges of them are from two to three inches high, and of the thickness of about $\frac{1}{4}$ of an inch. The bottoms of the baskets are made of plaited reeds, after being split in order to make them lie flat. They are bound all the way round with a slip of wood a little more than an inch broad, and about a quarter of an inch thick, to keep them together, which is nailed down, and three cross bars of wood are nailed across the back of each basket to keep it firm.

With respect to the stages, all those I have seen appear to me to be rather too broad to admit of people working with that ease which is requisite. I should therefore incline to think, that in place of one broad stage in a room, of six feet, or even four feet and a half, which I have observed to be the narrowest in use in France, it would answer the purpose better to make two stages of three feet broad each, with a passage betwixt them of three feet broad, and a like passage of three feet upon each side of the room next the walls; together with another passage of the like dimensions at each end of the stages, by which means all your people could go about and work with ease, without incommoding each other, and, indeed, without being hampered in any shape whatever. Besides, the stages being only three feet broad, must be a great advantage at the time of mounting, (of which afterwards,) because in that case the heat of the cabins in which the worms make their cocoons cannot be so great as must be the case when the stages are six or four feet and a half broad, as the fresh air must have much more easy access to pass through them; a circumstance of the highest importance, particularly at the time of mounting, as the weather, from the advance of the season, must then be greatly hotter than at any other preceding time during the whole course of the cultivation.

Both in Languedoc and Quercy, I have seen baskets used nine feet in length and four feet and a half broad, which exactly filled up one division of the shelf of the stage. But I could not by any means approve of baskets of that size, as they appeared to me to be extremely cumbersome and unwieldy; besides that, from their great length, and the necessary slightness of the materials, they were very apt to ply and bend down in the middle, and for that reason were, in my opinion, to be avoided. In short, I regarded them as being greatly inferior to the smaller baskets above mentioned, as to real use and convenience.

It is proper to observe, that care should be taken to place the stage in such a position as not to allow the sun to dart directly upon the worms, as they are not able to bear the heat of it in this manner when it is great. It will even kill them, especially when they are young; and if it should not go that length in a colder climate than in the south of France, it will, notwithstanding, have the effect to torment them, and render them very uneasy, and

prevent them from eating with their usual appetite. If the sun darts upon them when they are large, you will see them fly from it as fast as they can, and seek for shelter in the shade, even at the expense of the want of their food. When young they are not able to get out of the way, and by that means are often killed by it, as above mentioned.

In place of the wicker baskets already described, I observed a very simple and good contrivance practised at Montauban, in Quercy. They take a barrel hoop, which they form into a circle, fixing it with packthread or twine, after which they bind across the bottom eight or nine rows of reeds, both ways, by which means the bottom is thrown into little squares, tying the reeds not only to the sides of the hoop, but fixing them also in all the different places where the reeds come in contact with one another.

This forms a sort of basket, which is extremely light and handy; and besides, as the reeds stand at a good distance from each other, it gives much more air to the worms, which is a great advantage. After making their baskets, in this manner, they cover them with strong grey paper, (the strongest paper is the best,) and so place their worms upon them. This sort of basket I tried while I resided at Montauban, and found them lighter and more handy than those before described; however, it must be owned, that from their figure they do not pack so easily; or, in other words, take more room upon the shelves of the stage.

But to return to the treatment of the worms upon their being newly hatched: it is proper to observe, that too many leaves should not be given to them at a time, and that the leaves given should be spread very thin; because, if too thick put on, a great number of the worms, as they are then so small, will run the risk of being lost amongst the litter, from which they will not be able to disengage themselves; and you must be careful to cut the leaves small during the first ten or twelve days, where the number of your worms is such as to admit of your doing so: but if your quantity of worms is large, it would require too much work to cut the leaves for them, so that in such case you must give them entire.

When the worms are in their first age you need only clear away the litter once, because their ordure at that time dries as fast as they make it, being in small quantity. When the litter is to be taken away for the first time, you have only to turn the parcel upside down, and so pull off such a quantity of the litter as you find necessary, which is the most expeditious way of cleaning them at that time.

In giving the leaves to the young worms, you must make the leaves lie hollow upon them, to give air to the worms. When put on too flat and close, they prevent that free circulation of the air which is at all times necessary for the health of these insects.

During the whole of the first age, the leaves of the young plants of the mulberry, in the seed bed and nursery, as being the tenderest, are greatly preferable to the leaves of older trees as food for the young worms; for which reason it becomes of importance to have always a succession of young plants coming on yearly in your nursery grounds.

When the silk worms enter upon their sickness, they abstain from that moment from all manner of food. As soon, therefore, as you observe some worms of a parcel begin to grow sick, in place of three, give them only two meals a day; when more of them sicken, confine them to one meal only; and from the time you observe most of them sick, you must give them no more food, till the whole parcel, or at least the far greatest part of them, get over their sickness, (by having cast off their old skin,) that you may carry them all equally on; at least as nearly so as possible, which saves a vast deal of trouble in the management.

When the silk worm gets over his first age or sickness, he is of a greyish colour, and his little trunk, or point of his head, is of a jet black colour, by which he is then distinguished.

When he gets over his second sickness, that little trunk is of a brown colour.

When he gets over his third sickness, his head is remarkably large, which is the distinguishing mark at that time.

And when he gets over his fourth sickness, he is of a brownish yellow, or deep buff colour.

You must not clear away the litter from the worms while they are about changing their skin, or what is called their sickness; but as soon as they have got clear of their old skin, then you are to remove all litter.

During the second age it is advisable still to continue to feed your worms with the leaves from the young plants in your nursery, as these are still preferable to those of older trees for the worms at this time.

You must now begin to be attentive to clear away the litter from time to time, so as to prevent all danger of its heating, which proves highly injurious to the worms. These insects are remarkably fond of cleanness, which besides helps to enliven them, and gives them a keen appetite for the first leaves which are given to them always after cleaning. The litter is taken away in the following manner. You scatter some fresh leaves upon one corner of the basket, to which the worms having attached themselves, which they will readily do, you then take up the worms by means of the leaves and stalks they cling to, leaving the litter underneath. Having thus taken up all the worms from that corner, and placed them above those adjoining to them, you then clear away the litter from that corner, and carefully sweep together, with a little broom of twigs or heath, all the refuse and excrement, which you must remove entirely before you replace the worms in their station; and in the same manner you must proceed with the rest, till you have thoroughly cleaned the whole basket.

During the third age make use of the leaves of such trees as have been planted out in the field, but reserve the leaves of your oldest trees for the fourth age, as these last leaves are reckoned the best for worms when come to their maturity.

Be attentive to cleaning away the litter as before directed, which, during the third age, should be done at least four or five times; and take care to clear away, from time to time, all dead worms the moment you observe them; and to throw aside also regularly all such worms as appear to be diseased, to prevent them from infecting the rest, which will happen if this article is not pursued with the strictest attention. All the worms which you observe to grow of a yellow colour, and to have their skin shining, are strongly diseased, and must be immediately thrown away, for fear of infecting the sound ones. These diseased worms sometimes void a yellow liquid at their tail, and it often also bursts out at other places of their bodies. These must always be attentively removed the moment they are observed; but it becomes more essentially necessary before the worms enter into their third sickness, because at this time they become most dangerous, by voiding the yellow liquid above mentioned, which is poisonous to the worms, and exceedingly contagious; inasmuch, that every worm that happens to touch this liquid is sure to be infected with the same distemper, which has hitherto been found to be incurable.

Here I must observe, that tobacco is an immediate and mortal poison to the silk worm. If a few grains of snuff shall happen to fall upon one of these insects, it immediately shows great signs of agitation and distress, and in about a minute's time it is thrown by it into convulsions, which end in death. Just before expiring it throws out a small

globe of watery substance from its mouth; and if any other worm happens to touch this watery globe, that worm will also be immediately attacked with convulsions and die. Hence it appears to be necessary, that persons who are employed in feeding the silk worms should either give up entirely at that time the use of snuff, or should at least be extremely careful not to suffer the smallest grain of it to fall upon the silk worms, as their death is the certain consequence of their touching it; besides the danger arising to the other worms, from their touching the little globe of watery substance emitted by the worm first infected before it expires. It is proper also it should be known, that oil of any kind is as immediate and dangerous a poison to the silk worm as tobacco itself.

It has been remarked, that it is improper to change the worms during their sickness, because it may occasion the loss of some of them. But it is necessary to add, that if the litter at that time should prove to be in such quantity as evidently to run the risk of heating, before the worms can get quit of their old skins, which they generally do not accomplish in less time than two days and a half, that it is better to suffer the loss of a few worms, by removing the litter at that time, than to run the risk of losing the whole parcel, which undoubtedly would happen if the litter should be heated before the operation is over of their changing their skins. This article of keeping the worms clean will appear to be of high importance in the silk culture, when it is added that it is commonly computed that the loss sustained yearly in France, by the death of the worms during the times of their four different sicknesses, by being smothered in the litter, by the great quantity of litter, leaves, and worms above them, and by the litter's happening to grow damp and to heat at these critical periods, is not less, upon an average, than between two and three millions of livres annually, which is equal almost to a tenth part of the whole yearly produce of silk in France, which, as already mentioned, is computed at thirty millions of livres.

Here I must remark, that this is the time to assort your worms into different classes, and endeavour to have every class as nearly of a size as possible; that each class may be wholly ready to mount and make their cocoons at the same time. This is also the time to push on those worms which appear to be a little behind, by not having had an equally easy access to the leaves with the rest, that you may render them equally ready to mount with the others. This is done by putting them into a basket, apart by themselves, and by giving them an additional meal each day more than what you give to the others, until you observe by your eye, that they appear to be equal in point of size with the rest.

Being now arrived at the fourth age, the time approaches when the worms will mount in order to form their cocoons; and the person, therefore, who pursues the culture of silk, must now begin to prepare for that important period. One of the first objects of his attention, must be to provide himself with a sufficient quantity of small brushwood, for making the cabins of the worms; and there is nothing more proper for this purpose than heath or broom, when either of these can be obtained; when neither heath nor broom are to be had, any other kind of small brushwood will answer, preferring always such as is bushy at the top, and whose twigs are of a sufficient strength to support the weight of the worms. But it is to be remembered that the slender brushwood is the best, that you may be able to bend it which way you will. Strong brushwood is not so pliable, and by that means not proper for the purpose.

Having provided your brushwood, it may be proper to prepare a parcel of baskets, for such of your worms as are soonest ready for mounting, in the manner practised at Montauban, in Quercy, which

is done as follows: you take a round willow basket, which you dress with brushwood, putting the wood round two-thirds of the basket, and leaving the other third open for putting in the worms, and to give an opportunity to clean away their litter. You then pull the ends of the wood together at the top, so as not to press too closely upon each other, and so tie them with a little twine or packthread, to keep them in their place; after which you put a paper cap, pretty large, upon the top of the wood, it having been found that the worms are very fond of making their cocoons under a cover of this kind, as it affords an opportunity of attaching some threads of silk to the paper, which enables them to fix their cocoons the more firmly in their place. I had some baskets dressed in the above manner, the brushwood of which rose near four feet above the basket. This appeared to me to be an excellent contrivance, as it had the advantage of keeping the worms much more cool and airy, than when in the cabins on the stage. But this cannot be done with a large quantity of worms, because it occasions a good deal more expense; besides, that these baskets take up a great deal more room than the cabins on the stage.

In putting up the cabins on the stage, the two rows of brushwood at the extremities of the stage are made much thicker than the others, especially for six or eight inches above the shelf, to prevent the worms from getting out at the ends, and falling over the stage. In putting up the other rows, you lay a little piece of wood, or a reed, across the stage, for each row; and in putting up the brushwood, you make the first turn to the right hand, and the second to the left; and so alternately, keeping the reed in the middle, which binds all fast. This article of the reed I saw practised at Montauban, and seems an improvement to their manner of erecting their cabins in Languedoc, as it serves to make the cabins firm, and keep the rows straight.

In dressing the stage with the brushwood, it is advisable to cover the pillars which support it, and to cover likewise the top of the stage with brushwood. In constructing the cabins, great care must be taken to put up the brushwood in such a manner as to allow a passage for the worms betwixt the different branches, which, however, must not be too wide, and it is right to make a great number of the points of the brushwood touch the shelf; because it affords the greater opportunity to the worms to mount. Many people at Montauban, I observed, put a number of roses, or other sweet smelling flowers, upon the pillars which support the stage, and in other parts of the room, with a view to sweeten the air. But the best apparent means for this purpose is to take care to keep up a free circulation of fresh air in the room, by keeping open all the windows, and the doors also, if you find that to be necessary.

In forming the arches of the little cabins with the brushwood, there is always a little opening at the top of each pillar, occasioned by the curve or top of the circle. Take care to make this opening pretty wide, because it has been observed, that the worms make choice of that opening, by preference, to fix themselves in making of their cocoons. In order to make this opening of the width it ought to be, the brushwood should not be altogether straight, but rather crooked or bending. These openings are not only evidently the choice of the worms; but another advantage also arises from them, namely, that your cabins by this means contain a greater number of worms than it is possible for them to do when these openings are too small; and consequently fewer cabins will answer your purpose. When the brushwood is quite straight, it must necessarily occasion these openings to be made. The brushwood ought to be quite stripped of its leaves, and perfectly dry.

If, in forming the cabins, you place the brushwood quite upright, the worms, when mounting, run a great risk of tumbling down, of which I have seen several examples; and those worms which tumble down are for the most part destroyed by the fall. In order to avoid this inconvenience, you must make the brushwood which forms the sides of the arch slope a little, by which means you secure much firmer footing to the worms in mounting. Besides, when you form the cabins, you must be at pains to cut off all the very small slender shoots, which, when left to themselves, and not properly bound in with one another, have not strength sufficient to carry the weight of one worm, far less of several; and which, if left, must for that reason always occasion the loss of a good many worms by their tumbling down, as above mentioned.

In describing the stage, it was said to be proper to make the lowest shelf six inches broader than the one above it, that the lowest may project three inches on each side further than the one immediately over it; and to make the same difference of breadth in all the other shelves progressively as you go up to the top of the stage, which three inches of breadth in the different shelves is intended to receive the worms which may happen to fall from the shelf above. And therefore these different projections must be covered with brushwood, when once your cabins are well furnished with worms, as this will help to break the fall of such worms as may happen to tumble down. And for the same reason it is advisable, when once your cabins are well furnished with worms, to put a little brushwood in the bottom, and at the entrance of each cabin, as it will be of service to such worms as fall from the brushwood above, and afford them a proper convenience for making their cocoons in case they should be so stunned with the fall as to disable them from mounting again on the branches.

But to return to the treatment of the worms during the fourth age: as soon as you find several of your worms have got over their fourth sickness, you must pick them out and put them by themselves: that is, all those that get over that disease, for the first two days, may be put into one parcel; those of the next two days, into another parcel; and so on with the rest, that each separate parcel may be carried on as equally as possible.

Here I must observe, that the practice in France is to give none of the tender leaves, from this time forward, to the worms, but let the whole of their food consist of the leaves of the oldest trees they have, which, they think has the effect to give more consistence and strength to the silk produced by them; and it is proper to add, that from getting over the fourth disease, till within four or five days of their mounting, they are in use to give four meals a day to their worms.

The most attentive care must also be given to clear away the litter regularly every day, and if it can be got done, it would be advisable to clear away the litter twice in the twenty-four hours, especially during the four or five days immediately before mounting. If this cannot be done, as it is often found to be difficult to get it accomplished when the quantity of worms is large, you must, however, constantly make it a rule to clear away the litter regularly in such a manner as to prevent it at any time from increasing so much in quantity as to make it run the smallest risk of growing damp, and heating, which never fails to destroy the worms.

Many people, during the four or five days which precede mounting, which the French call the *grande fraize*, are in the custom of giving from four to five meals a day to the worms, giving a larger quantity of leaves at each meal. But it seems much more advisable to give them fewer leaves at a time, and to repeat their meals oftener, even to the number of eight or nine times in the twenty-four hours, &c.

Canst thou forget the heart that turned
To thee in all its wo or bliss:
And which still burns, as then it burned,
With all its young, warm faithfulness!

O turn again! and in those eyes,
Perchance, where wo his sign has set,
The light of better days will rise,
And her last bloom may flourish yet.

Yes, in that cheek where nature first
In all her earliest witch'ry shone,
The rosy flush again may burst,
And life and bliss be all her own.

SPORTING OLIO.



NORFOLK RACES.

A Match Race, two mile heats, for a purse of two thousand dollars, will be run for over the Norfolk Course on Saturday the 23d inst. by Mr. Wray's horse *Eagle*, and Mr. GARRISON's mare *Sally Hope*. *Eagle* ran the past fall at this place, Portsmouth, Hampton and Gloucester, and won the largest stakes at each place without being once beaten. *Sally Hope* also won the first day's race here, and a purse at Washington, beating some of their best horses. So that one of the most interesting races may be anticipated that has been witnessed here since the memorable one between *Sir Solomon* and *Wrangler*. Both nags are in fine condition, and both parties equally sanguine of success. [Norfolk Herald.]

SQUIRREL HUNT.

(From the New Hampshire Statesman.)

Two parties of ten each of our sporting friends in the neighbouring towns of Dunbarton and Weare, (N. H.) amused themselves on Wednesday, the 6th inst. in the exhilarating exercise of hunting. Returning at evening to Smith's tavern in Dunbarton, where they partook of a supper and other refreshments, it was found that the two sides could count up, as the trophies of the day, the following game.

Dunbarton.	Weare.
84 grey squirrels,	14 grey squirrels,
201 red do.	225 red do.
8 partridges,	9 partridges,
2 rabbits,	1 duck,
1 duck,	2 crows.
2 hawks.	

298

251

So the Dunbarton Sportsmen prevailed.

HUNTING SONG.

SIR—In the selection of songs for the Sporting Olio, a preference would seem to be given to the pleasures of the chase—As habit has given me a partiality for "my dogs and my gun," I send you a few lines which an old shooting companion sometimes sings to a few friends, after the day's amusement, when we are seated in snug quarters, enjoying a bottle of good sound port.

When Ceres and Phœbus are seen hand in hand,
With my pointers around me all under command;
I roam o'er the meadows and fields void of care,
No pasture on earth can with shooting compare.
With the game in my net I return home at night,
For my Dogs and my Gun are my constant delight.

New pleasures await me as home I retire,
For to please all my friends is my only desire;
My game I distribute and send them away,
Then with sparkling champagne crown the sports of the day.

Thus cheerfully passes each day and each night,
For my Dogs and my Gun are my constant delight

MISCELLANEOUS.

AMERICAN QUARTERLY REVIEW.—We refer the reader to an advertisement of Messrs. Carey & Lea, of Philadelphia, proposing to publish an American Quarterly Review; and it affords us no ordinary degree of satisfaction to add, that such arrangements will be made as to render the work valuable and permanent. Writers of the highest order are engaged as contributors, who are to be paid by the publishers after the manner of the London and Edinburgh Reviews. This is the only way in which the character of a work of the kind can be preserved. The worst of all support for such a work, is that expected from voluntary, unpaid for, and eleemosynary contributions. There is talent and learning enough in our country, to impart to the proposed work an exalted character, and we feel confident that the publishers will now call it forth. The editorial department is to be committed to Robert Walsh, Esq. than whom few men in any country are better qualified for the station.

[Con. Ad.]

Through life, I have observed there is no superfluous civility that brings more dissatisfaction to its donor, than a PARTY. Those that are not invited become his enemies; while those that are, receive the intended compliment as their due, and depart ridiculing the inadequacy of his efforts.

F. REYNOLDS.

RECIPES.

CURE FOR THE AGUE IN THE BREAST.

To Married Ladies.—A lady who has often experienced the assuaging effects of the following salve, and has frequently contributed to the relief of her suffering neighbours by its application, wishes to extend the benefits of it as far, if possible, as the agonies of a swelled or gathered breast may be felt; and for that purpose requests us to insert their recipe in the Spectator. We take pleasure in giving our aid to the accomplishment of her benevolent purpose; and add our testimony (from experience in [one of] our own families,) to the great value of the composition. We have repeatedly known it cure, and to prevent, the distressing complaint—and never knew it to fail.

A plaster for a Broken Breast.—Take half a pound of mutton tallow, four ounces of beeswax, and rosin sufficient so as not to make it too hard; melt them together; add a gill of good spirits; let it simmer over a gentle fire until the spirits are evaporated. Spread it on soft leather, (or strong linen,) so as to cover the breast, with a hole for the nipple.

[Edwardsville Spectator.]

EDITORIAL CORRESPONDENCE.

THE SHIP-BUILDER AND THE FARMER—how connected.

MR. EDITOR,

A few weeks since I had the honour of an invitation to accompany a party of ladies and gentlemen to visit the splendid frigate "Baltimore," and to see her weigh anchor and make sail for Rio Janeiro. This fine ship was under the command of Captain Buchanan, by whose orders and

personal kindness the company was conducted through every part of her, to the admiration of all on board. Never did any vessel exhibit more happily the combination of all that was requisite to strength and swiftness—elegance and comfort; every department displayed the skill, fidelity and pride of naval mechanism. The rigging, from the well established manufactory of Mr. James Ramsay, appeared especially to display every novelty and beauty, both in the art and the material. The smith's work looked, for strength, to be worthy of Vulcan's own anvil; and the timber, in substance and seasoning, seemed as if it might well defy the ravages of time and tempest.

The large party of ladies and gentlemen saw this proud monument of Baltimorean excellence in ship building, spread her "white canvass to the breeze," with feelings of pride, that she was going to proclaim on every sea that the city which gives "graves to her invaders, to her defenders monuments," is not wanting in a knowledge of the useful arts that belong to peace, and the finer ones that indicate and promote national prosperity.

On returning to the steam boat, the company partook of a sumptuous entertainment prepared for the occasion, with his usual good taste, by Captain Trippe at the instance of Mr. Rebello, whose affability gave a charm to the whole excursion. The afternoon was passed in great harmony—pleasure beamed on every countenance, and as the social glass went round, numerous sentiments and healths were drunk with cordiality and glee. Amongst the guests was Col. Stone, of New York, whose politeness prompted him to drink health to the citizens of Baltimore, and to offer the wish that their prosperity might keep pace with their hospitality.

Mr. Eckford, of New York, under contract with whom the Baltimore had been built by our successful architect, Mr. Beacham, was also one of the guests; and here, Mr. Editor, let me stop to remark, that perhaps no citizen in the United States has contributed more by his purse and personal energy, to our success and glory on the ocean and the lakes, than this gentleman. He was the great reliance of the government, in the gloomiest period of the war, when we were waging, single handed, a "war of the broad-axe," with the most powerful nation in the world. In short, sir, who can tell what would have been the extent of the ravages that would have been committed through all our northern frontier, by the British and their red allies, during that contest, if they had not been arrested by a naval force which no man at that time was competent to provide except Henry Eckford? But I must not digress from the objects of your paper, nor my own design, which is simply to show how valuable is the ship-builder as a customer to the farmer; and this may best be done by repeating an illustration of the subject on the occasion here spoken of. In the absence of Mr. Eckford, who is free from ostentation, as he is full of energy and talent in his profession, the Editor of the American Farmer proposed "The health of Henry Eckford—of him who gives employment to the skill, and sustenance to the families of so many worthy mechanics—any city may be proud." Then followed reflections on the extent to which the Farmer is benefited by such men as Mr. Eckford, and the suggestions naturally followed, that in the construction of every ship he must give employment to the farmer of Kentucky for his hemp, to make rope, oakum, sail cloth, twine, lines, &c.—to the farmer of North Carolina for his tar, pitch and turpentine—to him of Virginia for coal from Norfolk, and beef and tallow from the South Branch—to the farmer of Pennsylvania, for Susquehannah pine and whiskey—to him of Connecticut, for cheese—to the farmer of New York, for peas and butter—to Massachusetts, for glass and codfish—to the landholder of Florida, for live oak—and to him of Maryland, for flour, yellow pine and

white oak—and to the farmer of Hampton, for iron of best quality—to him of Ohio, for pork and lard—in short there is scarcely a trade or occupation upon which human industry is profitably exercised that is not encouraged by the ship-builder, when he furnishes a means of interchanging between all nations, and making common stock amongst all; the most valuable improvements and discoveries, and the most precious fruits of civilization and refinement that belong to any one of them. No individual in the United States, it was observed, has put in requisition so many of those who exercise, or depend directly or indirectly upon, the trades of the ship chandler, the rope maker, the sail maker, the mast and block maker, the boat builder, the paper maker, the tanner, the plumber, the glazier and painter, the cooper, the tallow chandler, the grocer, the butcher, the coal merchant, the baker, the cheesemonger, the optical instrument maker, the farmer, the grazier, the miller, the malter, &c. How much more then are we bound to pay respect to those who push with energy and honour a trade that gives occupation and comfort to so many classes of their fellow citizens, than to the mercenary politician, or the military chieftain in wars of aggression? Need I add, that the "health of our guest, Henry Eckford," was drunk by the whole company, *una voce*.

THE NEW BUSINESS.

MR. SKINNER,

Your suggestion of a new Commission Merchant, or an agent for the sale of stock, is an excellent idea. A man, honest, active, and fitted for the purpose, might at once jump into great business. We want an agent for numberless purposes—to sell pork and hams, to sell lard, poultry, fruit, and vegetables of all kinds. As we now send them, the market is so far off, the Captain cannot take them up, and if he could, he has not time to retail them, and all our notions are now sacrificed to sharpers and hucksters. A good agent would at once establish a choice little market on the wharf, to the mutual advantage of the farmer, the housewife, and the consumers.

RICHARD.

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 8, 1826.

ECLIPSE.—Many requests being made, that the citizens generally may have an opportunity of seeing "American Eclipse," the Editor has the satisfaction of now saying, that this horse will be shown in Washington Square, on Saturday, the 16th inst., at 12 o'clock precisely.

Eclipse has been pronounced, by the very best judges of horses and their pedigrees, in point of form, to be certainly superior to any horse now known in this country; and in point of pedigree, to be inferior to no horse in this country or in England. He shews at first view, even to a common judge, great strength and delicacy, a point very rarely combined in the blooded horse. Without going through his pedigree, it will not be amiss to say that Eclipse has one cross of certainly the best horse ever imported. His grand sire was the famous horse "Messenger." Immediately after the exhibition, he will proceed on his journey south, from whence he will no doubt never return. So that this may be the last time he will ever cross the Potomac.

Long provender of all sorts continues very high. Hay is selling at \$25 per ton. Straw of rye, threshed out, \$14 to \$15; and that of wheat, which has been trodden out, brings from the china-men, for packing that ware, \$15 per ton. Hundreds of tons of this article is used for litter, and thrown away on our navigable water courses. Could it not

be packed and sent to market with profit? By the agency of Mr. Charles Williams' cotton packing machine, 476 lbs. of hay may be pressed into a space of 4½ feet long, 2½ broad and 2 high. The subject is worthy of calculation. At the price above mentioned, the straw of a stack of rye is said to be worth more than the grain.

PRICES OF STOCKS.

(Reported for the American Farmer, by MERRYMAN & GITTINGS, Stock and Exchange Brokers.)

Baltimore, Dec. 8, 1826.

BANK STOCKS.	par value.	present price.
U. States' Bank Stock, per share,	\$100	\$120½
Bank of Maryland, do.	300	227 w
Bank of Baltimore, do. (div. off.)	300	340
Union Bank Maryland, do.	75	75 w
Mechanics' Bank,	9	9 w
Franklin Bank,	20	25.25
Commercial and Farmers' Bank,	20	26
Farmers' and Merchants' Bank,	50	54.25
City Bank, w	15	20.80
Marine Bank,	25	27.25
Farmers' Bank of Maryland, w	50	52.25

CITY STOCKS.

Corporation 6 per cent. redeemable } after 1836,	100	111
Do. 5 per cent. redeemable in 1832,	100	101½ w
Penitentiary 5 pr. cent. stock; (none } in market,)	100	
Museum, 8 per cent. (no demand.)		
Masonic Hall, 6 per cent.	100	par & int.
Annuities, or Ground Rents,	6 to 10	per cent.

ROAD STOCKS.

Reister's Town,	20	10.25
York,	20	7.50
Frederick,	20	12
Washington and Baltimore,	50	31.50
Baltimore Water Company Stock, } per share, (div. off.)	50	93
Union Manuf. Co. Stock, per share,	50	14 w
Gas Stock,	100	106
Texascaltepec Mining Co's, per share,	600	850
Havre de Grace Turnpike 6 per cts. par & interest		

U. STATES' STOCK.

Six per cent. 1813,	100	101½ w
1814,	100	102½ w
1815,	100	105 w
Three per cent.	100	81
Four and half per cent.	100	103
Five per cent.	100	108

W., wanted—by Merryman & Gittings.

FOR SALE,

A valuable young JACK and three JENNETS. The Jack was sired by Colonel Fitzhugh's celebrated Jack, "Knight of Malta," and will be five years old in May next. The first premium was awarded for him at the last Maryland Cattle Show, on the Eastern Shore. The Jennets are descended from Gen. Washington's "Compound" stock. They are young and in good condition. Apply to the Editor of the American Farmer, or to the subscriber, residing near Centreville, Queen Anne's county, E. Shore, Md. To save trouble, the price is \$600 for the Jack and Jennets, or \$350 for the Jack alone.

JOHN TILGHMAN.

Dec. 8, 1826.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.	RETAIL.
		from to	from to
BEEF, Baltimore Prime,	bbl.	8 00	
BACON, and Hams, . . .	lb.	6	9 12
BEES-WAX, Am. yellow	—	29 30	50
COFFEE, Java,	—	16½ 17	20 22
Havana,	—	14 17	20
COTTON, Louisiana, &c.	—	11 14	
Georgia Upland,	—	10 12	
COTTON YARN, No. 10,	—	28 30	
An advance of 1 cent each number to No. 18.	—		
CANDLES, Mould, . . .	—	13 14	16 18
Dipt,	—	11 12	14
CHEESE,	—	8½ 12	12 15
FEATHERS, Live, . . .	—	30 32	37
FISH, Herrings, Sus.	bbl.	2 3½	
Shad, trimmed, . . .	—	5 50	6 00
FLAXSEED,	bush	1 00	1 10
FLOUR, Superfine, city,	bbl.	5 00	5 25 6 25
Fine,	—	4 75	
Susquehanna, superfi.	—		none
GUNPOWDER, Balti. . .	25 lb	5 00	5 50
GRAIN, Ind. corn, yellow	bush	55	57
white	—	55	57
Wheat, Family Flour, .	—	1 05½ 1 12½	
do. Lawler, & Red, new	—	95 1 00	
do. Red, Susque. . .	—	1 00 1 03	
Rye,	—	75	
Barley, Eastern	—	1 22 1 25	
Do. country	—	90 1 00	
Clover Seed, Red . . .	bush	4 50	5 00
Ruta Baga Seed, . . .	lb.	87	1 00
Orchard Grass Seed, .	bush	3 00	3 50
Mangel Wurtzel Seed, .	—	1 25	1 50
Timothy Seed,	—	4 00	4 50
Oats,	—	48	50
Beans, White,	—	1 25 1 50	1 87
HEMP, Russia, clean, .	ton	205 245	
Do. Country	—	120 230	
HOPS, 1st sort, (1826)	lb.	20	
HOGS' LARD,	—	7 10	12
LEAD, Pig	lb.	6½	
Bar	—	7½	
LEATHER, Soal, best,	—	21	23 32
MOLASSES, sugar-house	gal.	50	62½ 75
Havana, 1st qual. . .	—	30 32	37½
NAILS, 6a20d.	lb.	6½	9
NAVAL STORES, Tar, .	bbl.	1 50 1 62½	
Hitch,	—	2	
Turpentine, Soft, . . .	—	1 75	
OIL, Whale, common, .	gal.	30 32	40
Spermaceti, winter . .	—	80 85	88
PORK, Baltimore Mess,	bbl.	11 00	
do. Prime,	—	8 00 8 50	
PLASTER, cargo price,	ton.	3 50	
ground,	bbl.	1 50	
RICE, fresh,	lb.	3½	5
SOAP, Baltimore White,	lb.	12 14	18 20
Brown and yellow, .	—	5½ 8	10 12
WHISKEY, 1st proof, .	gal.	36 37	38 50
PEACH BRANDY, 4th pr	—	75 1 00	1 25
APPLE BRANDY, 1st pr	—	28 30	50
SUGARS, Havana White,	c. lb.	12 50 13 50	14 15
do. Brown,	—	10 50 10 75	
Louisiana,	—	9 75 10 00	10 11
Loaf,	lb.	19 22	20 22
SPICES, Cloves,	—	70	1 00
Ginger, Ground, . . .	—	7 12	12 18
Pepper,	—	16	25
SALT, St. Ubes,	bush	43	75
Liverpool ground . . .	—	48	75
SHOT, Balt. all sizes, .	clb.	8 50	12
WINES, Madeira, L. P.	gal.	2 50 3 00	3 50 4
do. Sicily,	—	1 10 1 15	1 50 2 00
Lisbon,	—	1 05 1 10	1 50 1 75
Port, first quality, . .	gal.	1 65 1 85	2 50
WOOL, Merino, full bl'd	lb.	30 35	
do. crossed,	—	20 21	
Common, Country, . .	—	18 22	
Skinnners' or Pulled, .	—	20 25	

Printed every Friday, at \$5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOR, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

ANTHRACITE.

(From the Franklin Journal.)

Remarks upon the use of Anthracite, and its application to the various purposes of domestic economy.

The use of the anthracite, as a fuel, has been so generally approved, that it seems likely to supersede, to a great degree, all other substances, both in manufactories and families. In almost every case, where it has been tried for parlour use, it may be said to have gained the preference over, even the best hickory wood; and it is not unlikely, that at no distant day, it will obtain an equally firm footing in our kitchens. Notwithstanding, however, the number and variety of trials that have been made, it does not appear that any particular form of grate, or size of flue, has as yet obtained a general or decided preference: in fact, it is rather remarkable, that some of the first attempts should be adhered to, when their inconveniences are but too obvious. This is probably attributable to the want of a collection of facts, ascertained with correctness, which might serve to settle the general principles applicable to the subject. To assist in forming such a collection, the following remarks are put upon paper, by an individual who has given much attention to the use of the anthracite, during the last four years. It is quite probable, that similar observations may have been made by others, but as the results were new to himself, and to almost all with whom he has conversed, he is inclined to believe that, if known, they have not received the attention to which they are entitled.

The first experiments were made on the 4th, 5th and 6th of the fourth month, (April,) 1826, and were intended to determine, whether a great draught, and a small flue, are indispensable, in order to burn the coal with ease, and to produce the quantity of heat required for ordinary purposes, and were made in the following manner:

A common cast iron Liverpool coal grate, was placed in a large open wash-house chimney, and being merely supported upright, by means of dry bricks, the flue was left of its ordinary size as when used with a large wood fire. The fire chamber of the grate was entirely of iron and not lined with brick, or any other substance. A fire was first kindled with Swatara coal, as being the easiest to ignite, and was continued throughout a day. On the following day, a fire was made of Schuylkill coal, and on the third day, of the Lehigh. In each case, the fire was as good, as those made of the same kinds of coal in other grates, and required about the same attention to keep up the combustion; the Swatara coal, requiring the smallest quantity of charcoal to kindle it, and the Lehigh, the largest; whilst a much greater proportion of the former was bright and glowing, than of the latter. The Schuylkill coal appeared to be at a medium between the two, in these respects.

Another trial was made by placing several iron bars upon the andirons, in an open Franklin stove, upon which the coal was burned with perfect ease, making a beautiful fire, and casting out a heat quite equal to that from wood.

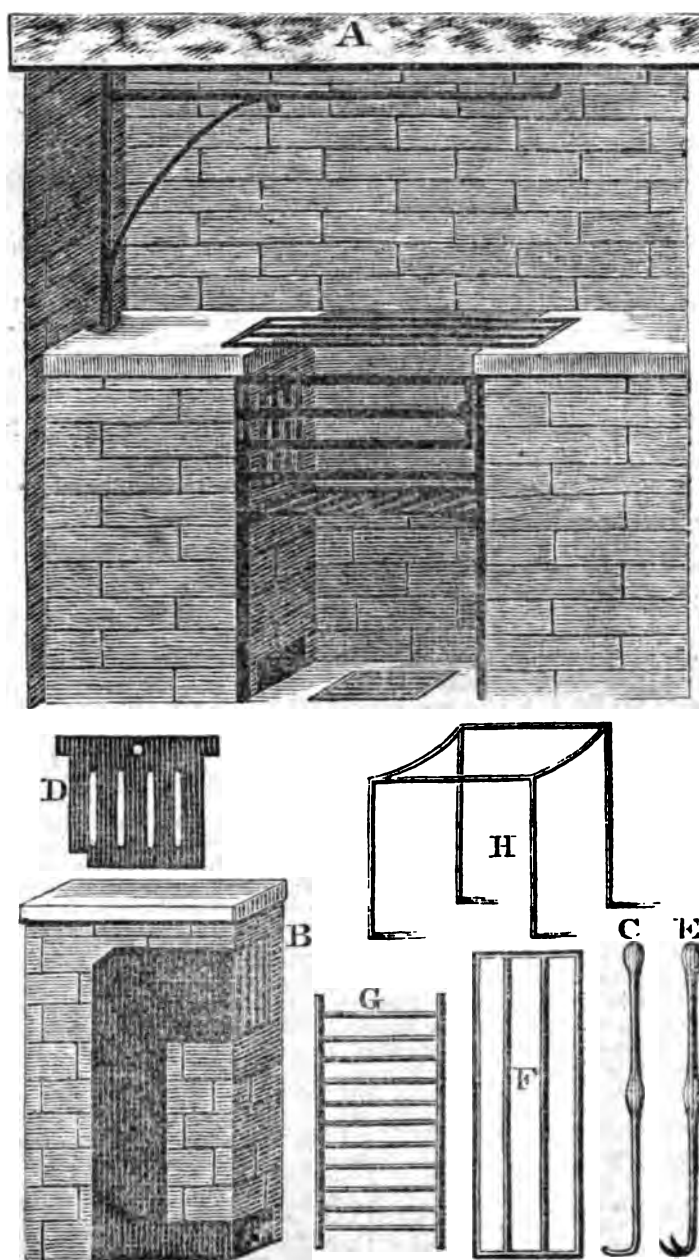
From these results, it seems that a small flue and a great draught, are not indispensable, for the purpose of making a good fire of anthracite. The latter, it is true, is of some importance in kindling the fire, but if a blower be used, the draught will be greater, and the fire more quickly kindled, with a wide flue than with a narrow one. The common objections to a fire of anthracite, now that the difficulty of kindling is surmounted, are, that it throws more dust into the room than wood does, and imparts an unpleasant dryness to the air. These objections are certainly in many cases well founded, and their removal is of importance to persons of delicate constitutions, and to those who are studious of neatness in their parlour arrangements.

That they generally, if not always, proceed from most satisfactory manner. The use of this grate having the flue too much contracted, and the grate too much projected into the room, there can be no doubt. By an increase in the size of the flue, and by placing the grate more backward in the chimney, the objections here referred to, may be entirely obviated; but, in that case, it may be needful to increase the size of the grate, so as to produce an increased quantity of heat, as a portion of it must necessarily escape, by an enlargement of the flue. A parlour grate, erected in conformity to these views, is found to answer perfectly well.

The next experiment was made, in order to determine whether the common culinary operations of a family, could be carried on as conveniently with coals, as with wood. For this purpose, the first mentioned grate was removed, and placed in a common kitchen chimney, with a wide flue, and open front; and all the usual process of family cooking, &c. were tried, and found to answer in the

most satisfactory manner. The use of this grate was continued for some weeks, until the plan of another was fully decided upon, embracing alterations calculated to obviate some small inconveniences. This grate, having been permanently erected in place of the former, it has been used daily, with the anthracite coal, during the last four months, for all the kitchen purposes of a small family, (except baking of bread which has not been tried,) and has proved as complete in all respects, as the common wood fire. In some points it is, in fact, preferable, as it does not require the cook to stoop, as at a wood fire; and the fuel is supplied with much less labour, and the steam and other exhalations being carried off by the open flue, the comforts of the kitchen are in no way diminished, but, on the contrary, increased, by an entire exemption from the too common annoyance of smoke.

The following is a plan and description of the kitchen grate, thus put into use:



A.—Front view of the chimney place, grate, crane, &c.

B.—The side flue, to assist the draught.

C.—Poker, about three feet in length.

D.—A cast iron plate, used to partition off a part of the grate, so as to make a small fire.

E.—Hook, for lifting and drawing out the moveable bottom of the grate.

F.—Guard iron, to be placed above the fire, for pots, &c., to stand upon.

G.—Bottom of the grate, made moveable.

H.—Stand, for the tin roaster.

The fire-place is three feet ten inches high, and three feet ten inches wide.

The grate is one foot six inches wide, nine inches deep, and the bottom, fourteen inches above the hearth; the bars are three quarters of an inch in thickness, and the space between them, an inch and a half; the bottom bars are half an inch thick, and an inch apart. The front bars are of square iron, and the upper one is moveable, and falls forward, so as to be on a level with the second, forming a convenient situation for a toaster, or other article, to be placed before the fire.

The side platforms are two feet one inch high, containing the side flues, which are two and a half inches, by four inches, covered at top by a soap stone slab

The main flue is five inches and a half wide, and runs all across the chimney.

The guard iron, is one foot ten inches long, and nine inches wide, with bars, half an inch square, and two inches asunder.

The dividing iron D, corresponds with the dimensions of the grate.

This grate* is of a size suited to a small family, but by extending its dimensions, accommodation may be had for the largest establishments. A second crane may be added, and the depth towards the back of the chimney increased, without injury to the other arrangements. The usual operations of boiling, roasting, and broiling, in a proper state of the fire, may be performed with the greatest ease; and after being accustomed to the use of it, there is little doubt but our cooks would, in general, prefer the coal fire to the wood.

The kitchen fire referred to, has always been kindled without a blower, merely by using dry bark, which, on experience, is found to be extremely well suited for the purpose; and in case of the fire sinking below what may be required for any particular operation, it may be revived, by adding a few pieces of wood or bark. But a blower may often be a convenience, and may be made with a common sheet of iron, adapted to close the chimney from the grate, upwards. It has been found by experience that the softer kinds of coal, are the best for small fires, and for cooking in general, as they burn more freely than the harder kinds. With all kinds, however, especial care must be taken, to have provided a supply of dry oak, or hickory wood, bark or charcoal, as, without one or the other of these, always at hand, great inconvenience may be sustained. Pine wood, cedar, or chips, are of little, or no use, to kindle the coal. There is an advantage in keeping coals upon a flooring of boards or brick, so as to prevent their being mixed with earth, a very small quantity of which will injure the fire; and coal, loaded by hand, is preferable for grates, to that moved with the shovel, as the fine stuff, is also injurious to a grate fire, though it may be advantageously used in a close stove.

Both parlour and kitchen grates, upon the plans above mentioned, have been found to answer so fully, that the writer of these notes, has made no provision for a wood fire, in his house. J. V.

11th Mo., 1, 1826.

AGRICULTURE.

MARYLAND AGRICULTURAL SOCIETY.

The Board of Trustees of the Maryland Agricultural Society met on Thursday, 7th Dec. 1826, at

* It was made by Stephen P. Morris, corner of Third and Walnut-streets, and put up by Raper Smith, Arch, near Fifth-street.

the residence of Mr. James Swann—present, J. B. Morris, B. W. Hall, D. Williamson, Jr., James Carroll, Jr., N. M. Bosley, James Swann, S. W. Smith, J. Cox, treasurer, and J. S. Skinner, corresponding secretary.

It was resolved—That Mr. Skinner, Carroll, and Mr. Smith be a committee to prepare a list of judges in each county of the state to receive proposals for the premiums offered for farms, and to report said proposals to the Board of Trustees. It shall be the further duty of said committee to prepare a letter of advice to said judges, as to their mode of proceeding.

Resolved, That the President, Treasurer, Secretaries, and Trustees do forthwith commence their collections, and that they each be required to pay into the hands of the Treasurer at least the sum of \$20, before the 1st day of June next.

The Board then proceeded to the consideration of the scheme of premiums for the next Cattle Show, which was reported by a committee in September last; and having made some alterations therein, adopted the same, and

Resolved, That the scheme of premiums for the next Cattle Show be published in the American Farmer; and that the Editors of the several newspapers in the state of Maryland and District of Columbia be requested by the Corresponding Secretary, on behalf of this Board, to publish the same in their respective papers.

List of Premiums to be distributed in 1827.

FARMS.

For the Farm of not less than 100 acres, which shall appear to have been cultivated, with the greatest economy and nett profit, consistently with its permanent improvement; reference being had to its natural advantages as to soil, situation, &c., \$50 00
For the second best Farm; particulars as above, 30 00

CROPS.

For the best 10 contiguous acres of Wheat, to be not less than 30 bushels per acre, 20 00
For the best 10 contiguous acres of Indian Corn, yield not less than 60 bushels per acre, 15 00
For the best 10 contiguous acres of Rye, yield not less than 30 bushels per acre, 12 00
For the best 5 contiguous acres of Hay, timothy, clover, rye or orchard grass, or any of the above mixed—weight to be ascertained at least one month after cutting, 15 00
For the best 5 contiguous acres of Wheat, yield not less than 30 bushels per acre, 12 00
For the best 5 contiguous acres of Indian Corn, yield not less than 60 bushels per acre, 10 00
For the best 5 contiguous acres of Rye, yield not less than 30 bushels per acre, 10 00
For the best 2 contiguous acres of Hay, as above, 10 00
For the best crop of Tobacco, not less than 5 hogsheds, highest price, 20 00
For the second best crop of Tobacco, as above, 10 00
To the person who shall raise the greatest quantity of Seed Cotton in this state, 10 00
For the best acre of Potatoes, not less than 200 bushels, 10 00
To the proprietor of the Apple Orchard, consisting of not less than 200 trees, which shall evince the most judicious management, 10 00
For the most successful experiment in water-wreting, or otherwise preparing Flax or Hemp; the quantity to be not less than

50 lbs dressed—the whole process to be stated and a sample to be produced, 10 00

HORSES AND MARES.

For the best thorough bred Stallion, pedigree properly authenticated to be produced, and left with the Society for publication, 20 00
For the best Stallion adapted to get stock for the saddle, 15 00
For the best Stallion adapted to get stock for quick draft, 15 00
For the best Stallion adapted to get stock for slow draft, 15 00
For the best thorough bred brood Mare, 20 00
For the best brood Mare adapted to the saddle, 10 00
For the best brood Mare adapted to quick draft, 10 00
For the best brood Mare adapted to slow draft, 10 00
Specimens of the stock of all the brood Mares to be exhibited.

ASSES AND MULES.

For the best Jack, 20 00
For the best Jennet, 10 00
For the best pair of well broke Mules, raised in the state, 15 00
For the best mule Colt, by the side of its dam, 5 00

NEAT CATTLE.

For the best Bull over 2 years old, full blood Improved Durham Short Horns, 15 00
For the best Bull over 2 years old, full blood Devon, 15 00
For the best Bull over 2 years old, of any other breed, 15 00
For the best Bull under 2 years old, of any breed, 10 00
For the best milch Cow, 20 00
For the second best ditto, 15 00
For the third best ditto, 10 00
For the best Heifer of any breed, 15 00
For the second best ditto, 10 00
For the best pair of well broke Oxen, 20 00
For the 5 best grass fed Bullocks, 20 00
For the 5 second best ditto, 10 00

SWINE.

For the best Boar over 1 year of age, 10 00
For the best Boar under 1 year of age, 5 00
For the best breeding Sow, 10 00
For the best Sow Pig, 5 00

SHEEP AND WOOL.

For the best fine woolled Ram, 15 00
For the best pair of fine woolled Ewes, 10 00
For the best Southdown Ram, 15 00
For the best pair of Southdown Ewes, 10 00
For the best Dishley Ram, 15 00
For the best pair of Dishley Ewes, 10 00
For the Best Ram, of any other breed than the foregoing, 15 00
For the best pair of Ewes, of any other breed than the foregoing, 10 00
To the Farmer whose flock at the last shearing yielded the greatest average weight of Wool, the flock to consist of not less than 20; the wool of the whole to be weighed, being first cleansed of tags and filth—if fine wool, 10 00
As above—coarse wool, 5 00
To the Farmer who shall have raised, the last season previous to the exhibition, the greatest number of Lambs, in proportion to the number of ewes, (not less than 20,) 10 00
For the best specimen of shearing, (on the ground,) 5 00

DOMESTIC MANUFACTURES.

- For the best piece of Carpeting, not less than 20 yards, the wool whereof to be raised and spun on the farm of the candidate, 8 00
- For the best piece of Kersey, adapted to labourers, not less than 20 yards, as before, 5 00
- For the best piece of Shirting of any materials, not less than 20 yards, 5 00
- For the best piece 8-4 linen Diaper, not less than 15 yards, 5 00
- For the best hearth Rug, 4 00
- For the second best hearth Rug, 3 00
- For the best and handsomest piece 10-4 woollen Counterpanes, 4 00
- For the second best do. do. 3 00
- For the best pair knit woollen Hose, full size, 2 00
- For the second best do. do. 1 00
- For the best pair cotton Hose, full size, 2 00
- For the second best do. do. 1 00
- For the best pair knit thread Hose, full size, 2 00
- For the second best do. do. 1 00
- To the Spinners of the greatest weight of cotton, wool, or flax, in five hours; for each article, \$5, 9 00

IMPLEMENTS OF HUSBANDRY.

- For the best agricultural Machine, that may be considered new, and as deserving the patronage of the Society, 10 00

FERMENTED LIQUORS.

- For the sample of the best Cider, the pure juice of the apple, 10 00
- For the sample of the best domestic Wine, of the pure juice of the grape, 10 00

BUTTER AND CHEESE.

- For the specimen of the best fresh Butter, 10 00
- For the specimen of the best preserved Butter, 8 months old, 8 00
- For the specimen of the best Cheese, made in Maryland, 8 00

PLOUGHING.

- For the best Ploughing by three horses or mules, 10 00
- For the best Ploughing by two horses, mules, or oxen, 10 00
- To each of the successful Ploughmen 2, 4 00
- To the person in the State of Maryland or District of Columbia, who shall furnish for publication in the American Farmer, the best account of the whole process of raising Silk, which account shall be founded on actual experiment within said State or District, and shall be accompanied by a specimen of the Silk, 5 00

AGRICULTURAL SOCIETY OF THE VALLEY.

The Trustees of the Agricultural Society of the Valley, who constitute a committee for the examination of farms offered for premiums, respectfully

REPORT.

That in accordance with their duty, they obeyed a call from two members of the society, Mr. David Timberlake and Bushrod Taylor, Esq. and on the 27th and 28th of October visited their respective farms for the purpose of investigating their relative claims upon your society for the premium offered. They have examined as directed, in reference to, 1st. farm buildings; 2d. yards and manures; 3d. fences and general divisions; 4th. orchard and garden fruit; 5th. live stock; and 6th. implements of husbandry; and are pleased to find, that while discovering some things they were compelled to censure, they found much worthy of their highest commendation. They therefore measure out to the competitors such as duty orders and justice calls for.

Mr. Timberlake's farm is laid off into twelve fields, which originally were exceedingly rough and unpro-

ductive; but by his laborious exertion, persevering and never tiring industry, have almost entirely lost their unfarminglike appearance; and by crops of clover, deep ploughing, &c. have been made to yield him a bountiful increase. Land which twenty years since was scarcely considered worthy of cultivation, now yields an average of twelve or fifteen bushels of wheat. His fencing is not all of a character your committee could have desired seeing; but we think we saw evidences of an intention to inclose the whole farm with stone, and Mr. Timberlake gives that as the reason why he does not make new rails, and improve the fencing alluded to. Indeed your committee could wish that they had discovered the same system elsewhere that they did in the improvement of the fencing. The determination of Mr. Timberlake to make all his inclosures of a permanent kind, and to save his wood for those who come after him, deserves the praise of the living, and will secure to him the gratitude of posterity. Mr. Timberlake has this year built upon his farm two hundred and seventy rods of stone fencing, which we think will probably entitle him to the premium of fifteen dollars offered by the society for the greatest quantity of permanent fencing. This question, however, will be decided by the committee appointed to examine the certificates from competitors. The crop of corn which Mr. Timberlake has this year raised upon a field of about sixty acres, is a splendid exhibition of his great success as a cropper, and seems with other things to convince your committee that this part of his character as a farmer is unassailable. In relation to Mr. Timberlake's stock (with the exception of his sheep, which are at least respectable,) your committee will in a few words say, it is such as they derived neither pleasure nor benefit from examining.

In speaking of the other competitor we will present an extract from our report made at the meeting in November last. "The committee had got but an imperfect view of Mr. Taylor's farm before they discovered sufficient assurances that a system of management existed. In approaching Mr. Taylor's house, you pass through the centre of his farm, and leave three square fields on the right, the same number on the left, presenting the gentle undulation so desirable in a farm where the lands are liable to baking. Around these fields there is the most uniformly good fencing that your committee have ever seen in Frederick, and at the corner of each an admirable and lasting gate. These fences are made of substantial locust posts, well pinned together at top, and placed in pairs alternately fifteen inches from a straight line, so as to form, when it is completed, a worm of double that distance (2½ feet.) The rails are laid upon a stone foundation, and in every respect the fencing is such as particularly pleased the committee. When your committee state that Mr. Taylor's farm is laid off in the northern style, they wish to be understood as expressing their approbation. His plan of dividing a farm of 165 acres of cleared land into three lots of 10 acres, and six fields of 22½ acres each, they highly approve of. Because they believe with our soil and in our climate a few fields only on a farm are totally inconsistent with an improving rotation. Mr. Taylor states, and his declaration is corroborated by his neighbours, that when he took possession of his farm, in the year 1822, the larger proportion of his land would not bring more than one-third what it now yields, which is an average of 15 bushels of wheat and 30 of corn."

Your committee were somewhat at a loss in deciding between, but rather incline to the belief that Mr. Timberlake's sheep are superior. But Mr. Taylor's work horses and colts, (some of which will be exhibited before another committee for premium,) his horned cattle and hogs, are vastly superior. They are such as would do credit to any man, and render Mr. Taylor an object of just praise.

Your committee will not close this report without adding some further observations in reference to Mr. Timberlake's management: this they consider an act of justice to him, and an encouragement to similar exertions on the part of others. They have already observed that they derived no pleasure from the examination of his stock; this consideration, together with the unfinished state of his improvements, would, in their opinion, have rendered it improper at this time to award to him a premium for the best managed farm. There are some considerations, however, connected with this inquiry, which they conceive important to be presented to the public view. Mr. Timberlake is now in possession of a farm containing about 524½ acres. He commenced his agricultural labours where he now resides in the year 1805. His original purchase included 340 acres—being rather more than one-half of the tract which he now holds—the rest has been purchased by him at different periods, from the profits of his agriculture, and affords an honourable evidence of the zeal, industry and fidelity with which he must have pursued his profession. He has built a comfortable, handsome and well finished dwelling house, of stone; most of the materials, and much of the labour employed in its construction, appear to have been furnished by himself. The same remark applies to his barn, stables, and servant's houses, most of which consist of the same lasting material. He has bestowed upon a farm naturally destitute of water, an abundant supply, by digging two copious and never failing wells. But the principal merit which your committee are disposed to award to Mr. Timberlake, is to be found in his constant and successful efforts for the improvement of the soil itself. Such was the miserable system of husbandry pursued prior to Mr. Timberlake's coming in possession, that a portion of the land was thrown out as unworthy of cultivation, and the rest covered with limestone breakers.

There is no better criterion by which to judge of the merits of a farmer, than a comparison between the present condition of his estate, and that which it presented when he took possession of it. According to this mode of judging, the comparison appears to be in every respect favourable to Mr. Timberlake. An immense quantity of stone has been collected from his fields, and applied to the construction of fences and useful buildings. The happiest results have thus been effected, not only in furnishing useful and durable enclosures, but in divesting the soil itself of those obstructions which must ever be an insuperable bar to successful cultivation. It is obvious, too, from the general aspect of this farm, that the application of manure has not been neglected. Whatever may have been its productions under former management, it is evident that they are now extremely respectable.

When it is considered that Mr. Timberlake's fortune was laid in small beginnings; that he has raised a numerous family, and expended a considerable sum in settling them in life; that he was seriously injured about seven years ago by fire, which consumed several outbuildings, with grain, horses, &c. to a considerable amount; and that all his improvements and acquisitions have been made during a space including the embargo, the war, and these latter years equally inauspicious to agricultural success,—your committee are satisfied of the propriety with which they have bestowed praise.

After duly appreciating the claims of each competitor, your committee have, by a unanimous vote, awarded the premium to Bushrod Taylor: and while they confidently hope it will meet the approbation of all others concerned, they have every reason to believe their decision will receive the cheerful acquiescence of the other thriving competitors.

By order of the members.

WM. M. BARTON, *Chairman.*

HORTICULTURE.

(From the Technical Repository.)

OBSERVATIONS ON THE CULTURE OF SILK,

By the late Archibald Stephenson, Esq., of Mongreem, in Ayrshire.

(Continued from page 302.)

You must not be too hasty in putting up the brushwood on the baskets on the stage for the worms to mount. This ought not to be done till you observe a good many of your worms offering to mount, because the brushwood keeps the worms too close and warm, and exposes them to the danger of that disorder which the French call the *touff*, which is very fatal to the worms, and which does not seize them till they are just ready to mount. When they are perfectly full, and ready to mount, they are rendered feeble by too great heat, and the silk fairly chokes them, so that a great deal of fresh air becomes more particularly necessary for them at this time than at any other. For this reason it is even thought to be advisable not to put up your brushwood until you have seen a cocoon fairly made upon the stage. At any rate you can have some of your large baskets (of which you should have an ample provision,) ready dressed with brushwood, into which you can from time to time, as you observe them, put such of your worms as you find fully ripe for mounting. Besides, when you see a whole parcel ready to mount, you have only to take the basket which contains them out of its place, and put up one of those which is already dressed with the brushwood, by which means you can put your worms directly into the little cabins prepared for them, which will render your work much easier than it would be otherwise, and make it less hurrying. The basket thus emptied of the worms should be instantly dressed with brushwood, to be in readiness for the next parcel that shall be ready for mounting. Not a minute is to be lost when the worms are fully ripe, so that a number of these additional prepared baskets are of the utmost consequence at this time.

In preparing the little cabins for the worms, you must make choice of such small brushwood as is bushy at the tops, as already mentioned; and in arranging them you must intermix the tops of them with each other, which will render them thicker in the heads, but taking care always to leave little openings between the twigs, so as the passage for the worms may not be stopped, which is attended with this advantage, that it affords a great many little places proper for the worms to form their cocoons in. When the heads of the brushwood are too thin, the worms find themselves at a loss to fix themselves, and spend a great deal of their strength in ranging from branch to branch, to find a proper place for them. In placing your brushwood, you must order it so that the bottom parts shall stand as close to one another as possible, that the worms in groping about may every where find bushes to cling to. In using many kinds of brushwood, where the tops are very thin, they will of course put the bottoms at a distance from each other. But there is another great advantage in using many kinds of brushwood, which is, that the worms will find a great many different places to form their cocoons in, and thus they will be less likely to be affected by any one kind of disease.

are made across the breadth of the basket, at the distance of about eighteen or twenty inches from each other, so that you may easily put in your hand from one side to the other, to enable you to clean the intervals from time to time from the litter, as you shall find it necessary; which ought to be done at least once in twenty-four hours after the bushes are put up, and even twice if you can find time for it. The bushes are placed in such manner as to form with their heads little arches betwixt each row of the branches. By placing the bushes as above, they stand erect and firm, because they press equally upon the undermost as well as on the upper basket.

When the worms are mounted on the brushwood, care must be taken not to suffer any body to disturb them by handling or touching the brushwood, because when they begin to work, their first operation is to fix so many threads of silk to different parts of the branches, which threads are to serve to support and hold up their cocoons in their proper poise. If any one of these silk threads is broke by handling the branches, the worm finds, when he comes to work on the cocoon, that by the loss of that thread the cocoon has lost its poise, by which means, as it does not remain steady, he cannot work with advantage, so as to finish his cocoon properly. Disappointed by this means of continuing his work, he pierces the cocoon, quits it altogether, and throws out his silk at random wherever he goes, by which means his silk is wholly lost, as is the worm also, as he finds no place to lodge in with propriety, in order to prepare for his last change of state when he is to come out a butterfly.

Some of the threads of silk, which it has been already said the worm attaches to the different branches, upon his first beginning to work, are likewise sometimes broke by another worm working in his neighbourhood, which is attended with the fatal consequences above mentioned, though this last is an accident which happens but very seldom.

Such of your worms as you find loiter below, without mounting, notwithstanding they are ripe, you must be careful from time to time to place upon the brushwood, which is ranged at the two ends and along the sides of the stage. There are always some of the worms which are lazy, or have not strength enough to mount on the branches, which, however, are strong enough to make good cocoons when they are placed where they can make them, without the fatigue of mounting the brushwood. Those which are so unlucky as to tumble from the brushwood, should also be placed with the other weak worms, because the fall generally diminishes their strength greatly; and those which you then place upon the brushwood should be covered over with a piece of paper, to which they attach the threads of silk to keep their cocoons steady. You may also place some of the weak worms in papers, made up in the form of a cone or sugar loaf, in which they will make their cocoons extremely well.

Great attention must also be paid to visit carefully, from time to time, all the different cabins.

As soon as you find any worms which are not mounted, immediately all diseases must be removed, and the cabins must be cleaned, and the brushwood must be changed, and the worms must be placed in new cabins, and the process must be repeated, until the worms are all mounted, and the cocoons are all made.

shall all of them be ready to mount at the same instant. The consequence then is, that those which are ripe mount directly, and those which are not ripe remain in their cabins, and must have food given to them till such time as they are ready to mount in their turns, during which time the litter must be changed frequently to prevent corruption: but what is worst of all, the worms which are mounted on the brushwood, before beginning to shut themselves up entirely in their cocoons, discharge a quantity of liquid matter, which falls upon the worms below in the cabins, and wets and dirties them prodigiously; and that glutinous liquor drying and hardening upon their skins, prevents their perspiration, and deprives them of that pliancy and agility which are so requisite to enable them to mount, as well as to make their cocoons. The consequence often is, that the worms thus wet with that glutinous liquor contract diseases and die, at the very instant they are ready to mount; and as these diseases are too often contagious, by the worms bursting, the contagion is spread over the rest, which become also infected, and so the whole which remained in the cabins are often entirely lost.

Some few people, who are more attentive, and are sensible of the dangerous consequences of the above method, follow a different practice. They have the patience to pick out the worms, one by one, from time to time, as they observe them to be ripe, which they then place in the cabins, and which never fail to mount immediately, when they are properly chosen; that is, when the person who gathers them is a proper judge of their real point of maturity, which discovers itself by their bodies, but more particularly their heads being perfectly transparent, as before mentioned. The other worms, which are not ripe, they leave in the basket, and give them their food in the usual manner, till they become ripe in their turns, when they are constantly gathered up from time to time, and put into the cabins as they come to maturity. By this means you can change them with ease, and they are safe against being wet with that glutinous liquor above mentioned, which from repeated experience has been found to have such pernicious and destructive consequences. One may allege that this last practice occasions an additional trouble; but the answer is obvious, that by this method a great number of worms are preserved, which are utterly lost by following the other practice of putting the worms of a whole basket at once into the cabins; and consequently the quantity of silk produced is considerably increased, which does more than repay that additional trouble tenfold.

In putting the ripe worms into the cabins, take care to place them first of all in the middle of the cabins, that the middle may be well furnished with worms before you place any at the sides. Should you begin first at the sides, or outward ends of the cabins, you will find it extremely difficult to supply the middle of the cabins with worms, without disturbing and even destroying some of those which are mounting on the sides, in reaching in with your hand towards the middle.

I shall here take an opportunity of mentioning, that during the two first ages of the worms my practice always was, agreeably to Mons. Martelov's system, to keep the windows of the room shut; but when once the second age was over, I inured them by degrees to the fresh air, by opening the windows at first for a couple of hours in the middle of the day, and increasing the time by degrees, until at last I was always open day and night, particularly from the time of their getting over their fourth moult, until they completed their cocoons, unless it happened to be very hot. I proved remarkably well in the south of France, where the sun is very hot, and it upon me.

say that it is advisable to pursue the same method in Britain, as the difference of climate is great. On the contrary, I should incline to think, that in England the windows should always be kept shut during the night; but when once the second age is over, that it would be proper to habituate the worms gradually to the fresh air during the day; more particularly after their getting over their fourth malady, when it is of the greatest consequence to them: but even then, in case of cold wet weather, I should think it advisable to shut the windows occasionally during the day. In short, in this article, a man's conduct must be regulated by prudence and good sense, in which his experience will greatly assist him.

Upon this article of hatching the worms, it has been recommended to save the production of the first four days, as I observed this to be the general practice in France: but I must mention, that having met with a French gentleman at Montauban, who I understood had dedicated much of his attention to the culture of silk, and in which I was assured he had been particularly successful, I took the liberty, with a view to gain information, to request of him to favour me with an account of his method of management, with which he politely complied. By the account I received from him, I found that the material difference betwixt this gentleman's management and the general practice, consisted in the following particulars. He told me, that having long observed that the worms which were first hatched turned out always to be more healthy and vigorous than those which were later in coming out, he had for this reason adopted the following plan, which he had then followed for several years, and to which, in a great measure, he attributed his success.

If his intention was to raise a quantity of worms equal to two ounces of eggs, his practice was to put two ounces and a half of eggs to germinate, and to save no more than the production of the three first days, throwing away all the rest. He likewise made it a rule, upon their passing through their different maladies, to take only the forward worms, throwing away regularly all those which remain long in getting over their maladies; and he gave the following reason for his continuing to follow this plan; namely, that from many years' experience, he said he had found, that those worms which are hatched after the third day always turn out to be weakly, and are tedious in all their operations. For the same reason he rejected all those worms which linger in getting over their maladies, which he said was owing to their weakness, or to their being infected in some measure with some disease, which generally carried them off before they could make their cocoons; or if they did get the length to make their cocoons, these last he maintained were so light that they were not equal in value to the expense of the leaves which these worms will eat during their *grande fraize*. At getting over their different maladies, he saved only such as came away the first two days, throwing away all that were not ready at the close of the second day. From what observations I had myself made upon the silk worm, I thought this gentleman had a great deal of reason upon his side; but, as in every thing in relation to this culture, I uniformly made it a rule to satisfy my mind fully by experiment, I firmly resolved to submit his plan to that test. I was, however, disappointed in fulfilling my intention in that respect, by my having been obliged to return to Britain upon business, before the next season of the silk culture came round. At the same time, as I still continue to regard this article as a matter of great importance to that culture, I would humbly advise, that it should be fully canvassed by experiment.

III. The cocoons should be allowed to remain upon the brushwood for six or seven days after the last of the worms of that particular parcel are mounted.

After the cocoons are taken down, they should be assorted according to their colours, setting apart all the weak cocoons, and such as are double: those of each colour, which have a shine upon their surface, and thence called satiny, should also be put by themselves, as they form the second sort of silk. The double cocoons form the coarsest silk of the whole.

All the floss, or loose silk which is round the outside of the cocoons, must be carefully taken off, because the better the cocoons are cleared from that outer silk, the better they play in the basin, and of course the better the silk will wind off.

In clearing off the floss silk from the cocoons, when taken down from the branches, it is customary to make choice of those which are judged to be the best for seed, which are put aside by themselves; and afterwards from the whole of those to pick out in pairs such as are judged best for the purpose; taking care in this last choice to pick out an equal number of males and females, as far as one can judge of the different sexes by the cocoons. In doing this, care must be taken to keep the cocoons of the same day's mounting always separate by themselves, that the butterflies may pierce the cocoons at the same time. If the good cocoons taken from the whole are all first mixed together, and from this general heap the cocoons are afterwards picked out in pairs for breeding, the consequence will be, that there will be set aside the cocoons of worms that have mounted the brushwood upon different days, which of course will have the effect, that the butterflies will pierce the cocoons unequally; that is, not on the same day, but at times distant from each other; so that there will not be an equal number of males and females produced at the same time, which must occasion the loss of a great many of the butterflies, and consequently the quantity of eggs or seed will fall short of what was intended, which shows the necessity of precision in keeping the cocoons of each day apart.

When you happen to have more females than males, you must employ the males of the preceding day a second time, that you may not lose your supernumerary females. But this is only to be done upon an urgent case of this kind, because it is greatly preferable to cause the males to serve only once, if you can calculate so as to have always an equal number of both sexes for copulation.

The double cocoons are to be distinguished by being much thicker than the others, generally broad, and not quite round.

In taking the cocoons off the brushwood, pick them off carefully, especially if there are any dead worms amongst them, which presently corrupt; because such of the cocoons as touch these dead worms are spoiled by them, as they contract by that touch guinness from the dead worms, which hinders the silk from winding off properly from the cocoon. The best manner to know the good from the bad cocoons, is to press them at the two ends with your fingers. If they resist well that pressure, and appear hard and firm betwixt your fingers, the cocoons are certainly good.

Though they appear firm upon pressing their sides with your fingers, they may still not be entirely good; the pressure at the two ends being of all others the best manner of knowing the good ones.

After the cocoons are taken down from the brushwood, such of them as are intended for seed must, with the utmost care, be cleaned from all the floss or loose silk which is about them, which, if allowed to remain, would greatly hinder the butterfly from getting out of his cell; after which, with a needle and thread, you must thread the cocoons by the middle, like a string of beads. But in doing this, you must take care not to hurt the insect in the cocoon with the needle. You are only to pierce just as much of the skin of the cocoon as is sufficient to attach it to the thread, and this is done at the mid-

dle of the cocoon, to leave the two ends of it free, as you cannot be certain at which of the ends the insect will pierce the cocoon. This being done, you hang up the cocoons against the wall of the room by a nail, until such time as the butterflies come out.

At putting the cocoons upon the thread, in order to prepare them for breeding, be at the pains to place a male and female cocoon alternately upon the thread, that they may be near each other for copulation, when they come to pierce the cocoon; and when the butterflies come out, you place them upon a piece of clean woollen cloth, that is perfectly smooth, having no nap or pile upon it, which may be hung upon the back of a chair.

The male is easily to be distinguished from the female, by his body being more slender, and by fluttering his wings oftener, and with a great deal more force than the female. When they have been about ten hours in copulation, the male is to be gently removed, as the female is supposed by that time to be sufficiently impregnated. The female will then proceed to lay her eggs upon the cloth, to which they will closely adhere, and upon which you let the eggs remain till about a month before the usual time for hatching, when they are to be taken from the cloth, which is generally done by means of a thin piece of copper coin, which in France passes for a penny, (*un sol marque*), and which is found perfectly to answer the purpose. The cloth upon which the eggs are laid is folded up lightly, and kept till the proper season in a drawer or closet, in a dry room, but not too hot. Every female butterfly is calculated to produce from three to four hundred eggs. The reason for recommending the eggs to be taken off the cloth about a month before the usual time of hatching is this, that it can then be done without the smallest injury to the eggs, which at that time are perfectly hard and firm; but if delayed till the time of hatching, the case becomes greatly altered, because the eggs gradually soften by the approach of the spring, so that they cannot then be taken from the cloth without the evident risk of destroying a great part of them.

Were it possible to wind off the silk from the other cocoons before the insect naturally pierces them, that is the best time for doing it, because the silk at that time winds off with much greater ease than afterwards. But as that is found to be impossible, two methods have been pursued to destroy the insect in the cocoon, that they may wind off the silk at leisure and with full convenience. The first method which was followed in France for that purpose, was to destroy them by placing the cocoons in baskets in a baker's oven; but if the oven happened to be a little hotter than was proper, the silk was by that means scorched, and often very much hurt by it. They therefore tried to kill the insect by the steam of boiling water, which could not at all hurt the silk, and they succeeded; so that the placing them in the oven is now wholly laid aside. The killing of the insect by the steam of boiling water is performed in the following manner:

They build a little furnace of brick, of a kind of oval form; the ground part of which is for holding the wood or charcoal which they use upon this occasion; and to make the fire burn properly, they have a little iron grate in the furnace, upon which they place the wood or charcoal; and over that, at a little distance, they place a little copper cauldron, which they fill with water, and make it boil by means of the fire underneath. Above this cauldron they have another iron grate, upon which they place the cocoons, in a little open basket composed of twigs, which is made pretty open between the twigs, to let the steam and heat of the boiling water have the easier access to the cocoons. To this cauldron and the grate above it for holding the basket with the cocoons, you have access by a little door which opens above the entrance for the fire. The furnace is arched over the top with bricks,

that when the door above mentioned is shut, the steam may be retained within, which, in the space of eight minutes, is found effectually to kill the insects within the cocoons. The basket is then taken out and put aside, to let the cocoons dry, as upon coming out of the furnace; they will be all of them wet with the steam, and they then place another basket in the furnace with more cocoons, taking care so to keep up the fire, as to have the water in the cauldron always boiling. Charcoal is preferable to wood for fuel upon this occasion, because it has no smoke. The smoke of wood spoils the colour of the silk and takes away from its lustre. The smoke of pit coal would be still worse.

Here it is proper to add, that after the insects have been killed by the steam, as above mentioned, care must be taken to stir about and move the cocoon regularly, at least once a day. If this is neglected, the insects will corrupt, and breed worms in the cocoons, which will destroy the silk. After the cocoons are taken out of the furnace, and dried a little, as before directed, they should be wrapt up in a good thick woollen blanket, to keep in all the hot steam, and to prevent all access to the exterior air. This is done with a view to stifle any of the insects which may happen to be yet alive, and which, if immediately exposed too much to the open air, might revive and recover their strength. They are left covered up in that manner with the blanket for five or six hours together; after which they are to be taken out of the basket, and spread out upon a table; and are afterwards to be stirred, and moved about regularly every day, as directed above. And you then assort the cocoons according to their different colours, of which they have three sorts in France, namely, the white, the yellow, and those of a greenish colour.

When the insects are once killed, the sooner you wind off the silk from the cocoons the better; because it can then be done more easily than after they have been kept for some time; upon which account they always wind off the silk as fast as they possibly can; and it is done in the following manner: They build a little copper cauldron into a small furnace of brick, with a fire-place under it, as in the other furnace already described, exactly in the same manner as we do in Britain, at the sides of our rivers, for the washing of linen at our bleach-fields, at the end of which they have a large reel, which turns round with the hand, and by a foot-board, and two or three little pieces of iron at proper distances, with eyes to them, by which to conduct the threads to the reel. The cauldron above mentioned, they fill with water, and keep it always boiling with a fire of wood or charcoal; the last, however, being preferable on account of its being free from smoke. They then put from 20 to 30 cocoons at once into the boiling water, and, with a small brush of little twigs, (of heath, for example,) they keep stirring the cocoons about. The heat of the boiling water dissolves the gum that is naturally about the silk, upon which, as the cocoons are continually touched and tossed, from side to side, amongst the water by the little brush, the ends of the silk attach themselves to the brush. When the woman who manages the brush, perceives that she has got hold of the ends of the silk by it, she takes hold of the silk thread with her hand, puts aside the brush, and pulls the silk towards her, which disengages itself with ease from the cocoons; and this she continues to do till she has got away all the floss or outside silk of the cocoons. When she observes she is come to the fine silk, she breaks off and separates the coarse from it, which coarse silk she puts aside. She then applies her brush again till she has got hold of the end of the fine silk, all of which she sets apart, every fine thread by itself, by fixing it to a piece of wood kept near to the furnace for that purpose, till she has arranged the or at least the greatest part in this manner,

which by that means are in readiness to be thrown in, to form the thread of silk which is to be wound off.

This done, she puts together the threads of as many of the cocoons as she inclines, according as she wants to make the thread fine or coarse. These she joins together, and after having put the silk through one of the eyes of two of the pieces of iron which are placed for conducting the thread to the reel, she fixes the silk thread to the reel; upon which another woman, who attends to manage the reel, begins to turn it about with her hand, and keeps it in motion by applying her foot to the foot-board, and by this means winds off the silk from the cocoons, which is done with great swiftness.

As soon as one or more of the cocoons are exhausted, the woman who manages the cocoons in the cauldron or basin, supplies their places from time to time with others, taking care while these are winding off to prepare others for keeping up a continual supply; and taking care also to observe that the silk winds off regularly from all the cocoons she puts in play together.

As she is obliged to have her fingers almost every instant amongst the boiling water, in order to manage the cocoons properly, she has a basin of cold water at hand, into which she dips her fingers alternately with the other, to prevent scalding them. But in spite of her best care, a woman who works any time at this management, finds her fingers at least so affected by the influence of the boiling water, that they are for some time in such a state she has scarce any feeling with them; but this afterwards goes off gradually.

Here it must be observed, that in forming the brush before mentioned, great care must be taken to have the points of it exceedingly small; because if the points are large and coarse, the silk will not take up fine from the cocoons, but will rise off thick and clotty, which will prevent its winding off properly upon the reel.

The winding off the silk is always performed in the open air, generally in some garden, to prevent any accident from the fire, and more particularly to prevent any bad effects from the bad smell of the dead worms, which stink prodigiously. For these reasons, this work is not suffered to be performed in any large town, but must always be done without the walls. When the day's work is over, they make a fire of brushwood, into which they throw all the dead insects, which are taken from the bottoms of the cocoons, opened with a pair of scissors for that purpose, and burn them together, in order to prevent any bad consequences from their stench and smell. This is done every night regularly, before the work people retire for the evening. As the manufacturers of the silk, and merchants who want to sell it, buy up large quantities of the cocoons, some of these people will have from ten to twenty of these little furnaces going at a time in the same garden, and even sometimes more.

As the whole of the silk cannot be entirely got off by the reel, what remains upon the dead insect is put aside, with the coarse part of the silk, which is taken from the cocoons in the beginning, till you meet with the fine thread which is proper for the reel.

The dimensions of the stove and basin made use of at Montauban, and described above, are as follows:

Height of the stove from the ground, 22 inches and $\frac{1}{4}$ of an inch.

Length of the stove, 29 $\frac{1}{4}$ inches.

Breadth of the stove, 24 inches.

Height of the iron bars for supporting the charcoal from the ground, for holding the fire, 12 and $\frac{1}{4}$ part of an inch.

Width of the door, or opening, at the bottom of the stove, for taking out the ashes, and for giving air to the fire, 9 inches and $\frac{1}{4}$ part of an inch.

Width of the door, or opening, at which you put in the charcoal, for supporting the fire, 7 $\frac{1}{4}$ inches.

Length of the oval copper basin, which is built in on the top of the stove, for containing the hot water in which the cocoons are put when they wind off the silk, 20 inches and $\frac{1}{4}$ of an inch.

Width of that basin, 16 $\frac{1}{4}$ inches.

Depth of the basin, 3 $\frac{1}{4}$ inches.

Breadth of the rim of the basin, 14 inch.

(To be concluded in our next.)

RURAL ECONOMY.

ON ICE HOUSES.

December 2, 1826.

DEAR SIR,

Having had some experience in preserving ice, in the latitude of Maryland, I will place at your disposal a few observations, as an addition to the generally judicious directions of your correspondent P. The shade of trees over the house, but not so much as to obstruct a good circulation of air, is a point of importance. There are many tracts on our Atlantic border, where you cannot go twenty feet deep for the springing of water; and a house eighteen feet square in the clear, and nine or ten feet below the surface, will keep ice very well. It is an essential point to prevent, as far as possible, all contact of the external air, especially of the warm season, to the ice.

I have had what is called a dry well, (i. e., a hole in the centre of the floor, sunk a little deeper than the common bottom of the pit,) in my ice house, and have seen them in others; but I have never been able to discover that the ice made any water into the receptacles. It shrinks and wastes by perspiration, and especially if your bottom be sand or gravel, I am convinced that the bottom logs should be bedded in it, and no place be left where air can insinuate itself under the ice.

Fodder, or corn tops, make a more convenient thatch than straw, and the thicker it is put on the better.

The ice should certainly be put away as solid as possible; and while pitting a layer of the large cakes, I have all the small ones, and broken bits, pounded, and with this pulverized ice fill in between the corners, and grout the crevices between the large cakes, and make it all like a piece of solid stone mason work.

I let no straw or litter of any kind come near the house, when I am packing ice; it only bothers you, and will get mixed in with the ice, without bringing then of the slightest service. I fill the log pit full of ice, hard out to the wood, and within a few days after I cover with straw, not 15 or 18 inches, but not less than 3 or 4 feet thick--and the thicker the better. Let the air circulate freely over it, but never come near the body of ice. I would keep it 20 feet off, if I could. I look to the house now and then, and from the middle to the last of March, the ice will begin to shrink from the side logs; and it will shrink regularly and with a smooth surface. I then immediately stuff in dry, cool straw, and stop out the air. When I used to put the straw on the sides as I packed the ice, when the ice began to shrink, I would find this side straw damp and disagreeable, and having got mixed in with the ice as packed, I could never get it out clean, and the sides of the ice melted into irregular holes, and air holes, and then it went faster. But now if the straw I stuff into the first regular shrinking get damp, all I thus stuff in I can get out, and easily replace with dry. I used to cover 18 inches thick, and frequently change the straw. But the straw from the barn yard, as cool as it can be had dry, is very many degrees warmer than the ice--and I found, that when I thus changed the straw, the ice went away faster at that time than at any other. I generally have a

tolerable plenty of straw, and I now put a large stack on at once; and I find while it lays several feet thick on the ice, that the straw next the ice is not near so liable to become damp, as when it was put on only 15 or 18 inches thick. It will, however, sometimes become damp, especially in a course of hot, moist weather—and whenever it does, we draw out this damp straw, and let the first layer of dry, cool straw come down upon the ice; and if I find the straw getting less than three feet thick, I bring straw from the barn yard, as dry and cool as I can get it, and put on the top of the straw in the house. Since I have adopted the above practices in a house only 12 by 18 feet in the clear, and not more than 9 feet deep, I have preserved ice till its return. In giving these minutes of my experience, I beg you to be assured I mean no disrespect to your correspondent P., but merely to follow and fill the chinks he left open. You will dispose of them, as you please.

Respectfully, Q.

LADIES' DEPARTMENT.

EDUCATION OF WOMEN.

The expediency of cultivating the intellect of man is pretty well settled at the present day, and it seems difficult to imagine why that of women should be neglected. If it have similar powers and equal strength, it is as deserving of care, and will repay care as well; if it be weaker and narrower, it needs the more to be strengthened, enlarged and disciplined. If the purposes of society and of life would be promoted by the establishment of domestic slavery, then every spark of intellectual life in the female Helot should be carefully extinguished; just as birds in a cage are blinded, that they may not look upon the forests and fields, the blue heavens and the green earth, and long to be abroad upon the air, till melancholy should stop their song. But religion and policy alike revolt at this. Man's best happiness, like charity, begins at home, and, like that, is apt to stay there; and home is sure to be just what the wife would make it. Now if it were true that a woman, who can do any thing besides making a pudding or mending a stocking, does these necessary things less willingly and well, than any one who can do nothing else; if it were true, as certainly it is not, that a wife submits to the conjugal authority, just in proportion as she is ignorant and uncultivated, how can the great purpose of marriage, the mutual and reciprocal improvement of the moral and intellectual natures of the sexes, be promoted by a union upon such unequal terms; and what must we think of a husband "*assez orgueilleusement modeste*," to wish of his wife an unquestioning obedience, instead of a sympathy of thought, and taste, and feeling? It is sometimes urged that, if a woman's mind be much enlarged, and her taste refined, she is apt to think differently of the duties of life, to require different pleasures from the rest of her sex: that her feelings leave the channels which the institutions of society have marked for them, and run riot, and bring her usefulness and happiness into danger. Now the plain answer to this is, that these evils happen, not because her reason was cultivated, but because it was not cultivated well; and because the taste and intellect of women generally do not receive due culture.

[*North Am. Rev.*]

[The wonder, not to say the shame, seems to us to be, that a question should be raised, at this time of day, as to the expediency of such institutions, and such a course of instruction, as are necessary to insure solid culture and various embellishments to the female mind and character. But as there has appeared to be sufficient ground for serious and impressive reflections on it, in a journal so distinguished for elegant and profound learning as is the North

American Review, in copying the above we take occasion to add a single suggestion. Were all other inducements to bestow assiduous attention on the mental culture of females to be overlooked—were we to lose sight entirely of the delights of intellectual intercourse with ladies of superior mental endowments; still there would be an adequate and ample consideration for giving all attainable improvement to the minds, and, through that, to the hearts of all the rising female generation, in the solitary reflection that they are to be, in a material degree, and to an extent far beyond what is generally adverted to—the *instructors for the mind, and the guardians for the morals of our own sex*. Every one who considers the powerful agency of the mother in giving culture to the faculties, and a cast to the principles of her sons, will at once admit that nothing can more conduce to the formation of good and able men, and of course to the prosperity and happiness, and honour of a nation, than that the greatest care should be bestowed on the mind, and the utmost attention paid to the principles of females. It is to them we are almost exclusively committed, when mind and body are equally plastic, and when both are most liable to be enfeebled and tainted for life.

Knowledge is power, says the great Lord Bacon, and another philosopher of yet greater renown, ascribes to it the power of *commanding happiness*.

"—celestial wisdom calms the mind,
And makes the happiness she does not find."

May not then that system and state of things be denounced barbarous, under which the fairest portion of God's creation would be shut out from such blessings.—ED. AMERICAN FARMER.]

SPORTING OLIO.

ON BETTING.

(From the Hunting Alderman.)

Bets are the blockhead's argument,
The only logic he can vent,
His minor and his major;
'Tis to confess your head a worse
Investigator than your purse,
To reason with a wager.

The fool who bets too high, will have
Temptation to enact the knave
And make his friend his martyr;
But they who thus would underhand,
Entrap, may be themselves trepann'd,
And sometimes catch a Tartar.

Some silly make the matter sure,
And then propose with look demure,
The bet at stake to double;
Forgetting that whatever vague
The trick may have, the man's a rogue
Whose betting is a bubble.

Tempt not yourself—still less your friends—
Where bets begin, attachment ends,
And up springs feuds and quarrels.
Leave wagers to the black leg tribe,
Lest with their practice you imbibe
A portion of their morals.

STAG HUNT.

On Monday, 3d April, 1826, for the last time this season, a fine stag was turned out on our race ground, before the hounds of C. Shard, Esq., in the presence of a numerous field of sportsmen. Several equipages and ladies on horseback, also, graced the lively scene, the delight of which was greatly heightened by the urbanity of the master, and the fineness of the day. The stag, on being liberated, for some time surveyed the assemblage, then took across the country, by Pile's farm, towards Itchen, which he left on the right, turning to the left,

through part of Mitcheldever wood, by Stratton, Farleyhouse, Nutley, Ilfield, Herriad-common, and Golden-pots, where he was viewed, and ultimately taken, after a brilliant run of three hours and a quarter. It is calculated that no less than 300 horsemen were present. [*Annals of Sporting.*]

MISCELLANEOUS.

CLIMATE OF THE WESTERN AND ATLANTIC STATES.

MR. SKINNER,

In an article inserted in the 36th number of the present volume of the American Farmer, the writer draws a comparison between the climate of the Western and Atlantic states, much in favour of the former: that this is an erroneous opinion, there is strong proof in the following statements which I have copied for you, from the Village Record, published at West Chester, in Pennsylvania.

"Major Stoddart, in his Sketches of Louisiana, considers the cold greater in winter on the Mississippi, than in the same latitude on the Atlantic coast. Doctor Drake, of Cincinnati, on the Ohio river, in latitude 39 degrees, after comparing the thermometer kept in that place for nine years, with one kept for the same time in Philadelphia and its vicinity, says, that the mean summer heat of Pennsylvania was 74.6 degrees, and that of Cincinnati for the same time, was 74.1. The average number of days in which the thermometer ascended to 90 and upwards, during the same period, was fourteen each summer at Cincinnati, and the greatest elevation was 98 degrees. Mr. Legaux says, the greatest degree of cold at Spring Mill, on the Schuylkill, was 17.5 below 0; while at the same time, at Cincinnati, the mercury fell 18 below 0. The average degree of cold near Philadelphia, for several years, as stated by Mr. Legaux, was 1.8 below zero—at Cincinnati, Mr. Drake states it on a mean of five years, as 2 below zero;—Cincinnati therefore appears to be colder than Philadelphia, although nearly a degree to the south of it. The Doctor mentions, that the thermometer in Kentucky, the southern line of which is in 36 degrees, 30 minutes, fell 14½ degrees below 0.

"Mr. Rector says, that the Mississippi at St. Genevieve, in latitude 38, was so firmly covered with ice in a single night, as to bear horses and carriages the ensuing day;—and a writer in the Port Folio, of October, 1816, whose letter is dated at Steubenville, in the state of Ohio, says, 'we had a hard frost on the 8th of June; but very few apples and peaches are left—cherries, plums and quinces are totally gone. In most of the gardens, even the currants were killed.'

"From these statements it does not appear, that there are any grounds for believing the climate, westward of the mountains, more temperate than on the east side. Indeed, reasoning from geographical position, we should think the cold must be greater in the same parallel of latitude on the west, than on the east side of the Alleghany, when we consider the immense ranges of mountains which extend from the heads of the Mississippi, and unite with the Cordilleras, and whose summits are clothed in perpetual snows. A north-west wind blowing from them, passes over a country as level as the steppes of Tartary, or the pampas of South America, unbroken by a tree, and must arrive with its cold undiminished on the Mississippi and Ohio; and we should, therefore, not be surprised to find the ice at St. Louis, in latitude 34½, according to Major Stoddart's statement, 22 inches thick in January.

"The parties under Captains Lewis and Clark found the snow on the mountains at the heads of the Missouri so deep, on the 17th of June, as to oblige them to wait some time for it to be diminished before they could pass. Lieutenant Pike, on the heads of the Arkansas river, which are nearly

united with some of the waters of the Missouri, says, the thermometer on the 2d of December, fell six degrees below zero; and the snow was so deep on the mountains as to render them perfectly impassable. This was between the 40th and 41st degrees of latitude. On the Rio del Norte, in latitude 36, he says, the snow fell a foot deep on the 6th of March, and so far south as latitude 33, on the same river, vegetation only began to appear on the 17th of the same month.

"Lieutenant Wilkinson, who parted from Pike, in order to descend the Arkansas river, states, that on the 28th of October, the river was frozen over, in latitude 37½, so as to prevent all possibility of proceeding; and obliged him to leave the canoes which he had made, and course the river by land.

"Mr. Darby, who resided seventeen winters in the Mississippi territory, and in Lower Louisiana, says, that advancing west from the Alleghany mountains, the intensity of the cold increases, and the seasons at St. Louis, are colder than at Cincinnati, although half a degree south of it, and further, that in no region in the world can the seasons be more uncertain than in the prairies of Louisiana, from one extremity to the other; no changes, particularly from heat to cold, are more sudden or more violent. He also states, that at Natchez, in latitude 31½, the peach is rendered precarious by the late frosts in the spring, and that cotton is often killed late in April. In Opelousas, which is a degree still further south, young peaches, cotton, flowers, and even twigs of oak were destroyed late in April. The cotton was also destroyed by frost on the 26th of September, and at Natchez the general aspect of the country, according to the same writer, from December to March, has as much the appearance of winter as at Pittsburg, and fires are almost as necessary.

"The same proportion of cold exists in more northern latitudes;—Michilimackinac being colder than Montreal, which is in the same parallel. Major Swan, of the U. S. army, mentioned, that a frost destroyed the greater part of the vegetables in the gardens of Michilimackinac on the 15th of August, and that the temperature of the air there in midsummer was not unlike a cool March day in Pennsylvania. West of Lake Superior, above the latitude of 46 degrees, the earth a few feet below the surface is frozen throughout the year; and at some stations of the North-western Fur Company, between lat. 50 and 56 degrees, wells, though very necessary, cannot be sunk on account of the frost, which in July was found at the depth of three feet, and continued to where the attempt was abandoned, twenty feet below the surface.

"From these few quotations, I think, sir, that you will probably consider the fact as incontrovertible, that on the west of the Alleghany mountains the cold is more severe than in the same latitude on the east side of them; and my own knowledge of the climate of the western states, confirms the authorities which I have quoted."

I may add to what is above mentioned, that Mr. Birkbeck, in a letter from English Prairie, Illinois, lat. 38 degrees, 24 minutes, dated Feb. 15th, 1818, says, "the Judge and the Bar are now working their way to the next county seat through almost trackless woods, over snow and ice, with the thermometer about zero." And again, "The mercury has once been 12 degrees below zero, and several times approaching that extreme."

ON THE USEFULNESS OF FROGS IN DESTROYING INSECTS IN GARDENS.

(Extracted from a French periodical work received in exchange for the American Farmer)

Gardeners wage the same war against frogs as with moles and all other insects mischievous to their

crops. But they are wrong in including frogs in the general proscription, since they not only do them no injury, but render them, on the contrary, important services; for they are carnivorous as well as herbivorous, and greatly prefer insects to vegetable food. They are particularly fond of snails, and swallow them even with their shells on, when they are not too large. If you open a frog, you will find his stomach full of insects hurtful to agriculture, and especially snails. The shells they digest, or rather dissolve in their stomachs, in the same way that dogs do bones, and turkeys the shells of nuts

[We once before mentioned a fact which was perhaps viewed as a jest, though not so intended—we have learned from our navy officers, with perfect conviction of its truth, that in Italy and on the shores of the Mediterranean, *turkeys* are fattened by feeding them on *unbroken* English walnuts, which they have the power to digest speedily. As to employing frogs for the destruction of insects, would it not be quite as well to breed land terrapins for that purpose? They probably subsist more exclusively on the insect tribe. How wonderful the arrangements of Providence, which seems to have created one species of animated existencies merely to subsist another, and that another—perpetuating the race of each by the same principle; for true it is, that

"Not man alone, but all that roam the wood,
Or wing the sky, or roll along the flood,
Each loves itself, but not itself alone,
Each sex desires alike, till two are one."]

CULTIVATION OF TEA IN SPAIN.

(Extracted from the same.)

The cultivation of tea, confined to China for many centuries, begins to spread into other parts of the earth. It was introduced into Brazil twenty years ago, by a colony of Chinese established in that country. As it will flourish in almost every part of South America and in the southern states of the United States, it will soon become an important article of cultivation and commerce in America, and even in other quarters of the world. The society of Friends, of the country of the kingdom of Valencia, in Spain, has offered a premium of 300 reals to any one that will raise a crop of 20 pounds of tea, rolled and separated, and having the same qualities and flavour as that imported from China. It is likely that the tea-plant would succeed perfectly in some parts of the south of France.

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 15, 1826.

At our suggestion, Curwen has consented that the discussion with Columella shall cease—and hence the "quotations" which had been furnished for this number, are omitted.

MR. EDITOR,

I have read the reply of Curwen, but do not perceive any argument or fact stated which requires any further notice, and being unwilling to trespass on your indulgence by a strife for the last word, I am quite satisfied to close the controversy on my part, here.

COLUMELLA.

CONTENTS OF THIS NUMBER.

Remarks on the use of Anthracite, and its application to the various purposes of domestic economy—List of Premiums to be distributed by the Maryland Agricultural Society in 1827—Report of the Agricultural Society of the Valley on Farms—Observations on the Culture of Silk, continued—On Ice houses—Education of Women—Poetry, On Betting—Stag Hunt—Climate of the Western States—On the usefulness of Frogs in destroying insects—Cultivation of Tea in Spain.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . . .	lb.	6	10	9	12
BEEF-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16½	17	20	22
Havana,	—	14	17		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	23	30		
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . . .	—	13	14	16	18
Dipt,	—	11	12		14
CHEESE,	—	8½	12	12	16
FEATHERS, Live, . . .	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	5 50	6 00		
FLAXSEED,	bush	1 00	1 10		
FLOUR, Superfine, city,	bbl.	4 87½	5 00		
Fine,	—	4 75			
Susquehanna, superfi.	—				none
GUNPOWDER, Balti.	25 lb.	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	55	57		
white	—	55	57		
Wheat, Family Flour,	—	1 05½	1 12½		
do. Lawler, & Red, new	—	95	1 00		
do. Red, Susque. . .	—	1 00	1 03		
Rye,	—	75			
Barley, Eastern . . .	—	1 22	1 25		
Do. country	—	90	1 00		
Clover Seed, Red . . .	bush	4 50		5 00	
Ruta Baga Seed, . . .	lb.	87	1 00		
Orchard Grass Seed, .	bush	3 00		3 50	
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	4 00		4 50	
Oats,	—	40		50	
Beans, White,	—	1 25	1 50	1 87	
HEMP, Russia, clean, .	ton	205	245		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	20			
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	6½			
Bar	—	7½			
LEATHER, Seal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.		50	62½	75
Havana, 1st qual. . . .	—	30	32	37½	
NAILS, 6a20d.	lb.	61		9	
NAVAL STORES, Tar,	bbl.	1 50	1 62½		
Pitch,	—	2			
Turpentine, Soft, . . .	—	1 75			
OIL, Whale, common, .	gal.	30	32	40	
Spermaceti, winter . .	—	80	85	88	
PORK Baltimore Mess,	bbl.	11 00			
do Prime,	—	8 00	8 50		
PLASTER, cargo price,	ton.	3 50			
ground,	—	1 50			
RICE, fresh,	lb.	3½		5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, . .	—	5½	8	10	12
WHISKEY, 1st proof. . .	gal.	36	37	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	28	30	50	
SUGARS, Havana White,	c. lb.	12 50	13 50	14	15
do. Brown,	—	10 50	10 75		
Louisiana,	—	9 75	10 00	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves,	—	70		1 00	
Ginger, Ground,	—	7	12	12	18
Pepper,	—	16		25	
SALT, St. Ubes,	bush	43		75	
Liverpool ground . . .	—	48		75	
SHOT, Balt. all sizes, .	c. lb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinners' or Pulled, . .	—	20	25		

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AGRICULTURE.

LITCHFIELD (CON.) AGRICULTURAL SOCIETY.

The Litchfield County Agricultural Society celebrated their annual meeting for the exhibition of domestic manufactures, animals, &c., agreeably to appointment, in this village, on the 11th inst. Our streets were filled with farmers, and other gentlemen interested in the prosperity of the society, at an early hour, and from previous notes of preparation, and the bustle of the morning, we had early assurance that the citizens of the county felt a lively interest in an annual Cattle Show and Fair. The first intimation we had that the services of the day had actually commenced, was a team of from fifty to a hundred yoke of oxen, led by a handsome fat ox, bearing the flag of the society, and drawing a car, decorated with choice specimens of the various products of our soil; among which a *quantum sufficit* of noble fine pumpkins shone conspicuously—emblems of Connecticut thanksgiving fare. This equipage was met on the green by a very large and fancifully decorated car from the west street, drawn by about thirty horses, and exhibiting elegant specimens from the different mechanic shops in the village, together with an individual from each craft, busily engaged in their respective callings. This last exhibition was new in this place; and as no pains had been spared to render it every thing that could be expected from such a display in a country village, the interest it excited among the multitude which at this time thronged the streets, was very powerful. After we had become satisfied with a view of the above mentioned shows, we turned our attention to the field, where were to be viewed the noble horse, the lusty ox, and the fatted calf—*not* for slaughter, but for breed. The report of the committee on domestic animals, which will be found in this paper will speak better on this subject than we can; and more definitely than we are able to do. By the way, we did not see among the domestic animals a solitary porker, to remind us of tender loins, sausages, and doughnuts—which at such like exhibitions we are very fond of seeing, and—of eating in anticipation. We cannot account for the fact that our society does not take a lively interest in this class of domestic animals; for notwithstanding all that is said of roast beef, batter and cheese, we doubt whether the whole cook book of George IV. can produce as many good satables out of any one animal, as our good housewives will manufacture from the different parts of a well dressed, fat hog. From the above mentioned field, we next entered the Court Room, where were to have been exhibited the evidences of the industry of the fair sex, and the skill of our mechanics. On entering the room, our eyes were dazzled with the sight of veils, ribbons, leghorns, shawls, silks, &c. &c.—whether of domestic or foreign manufacture, the deponent saith not—for we dare not ask the fair wearers whether their white hands handled the warp and the woof, or whether their father's hands purchased for them these fine articles of dress. Surely, said we, as we beheld a solitary piece of flannel, a few yards of carpeting, and but two *bed quilts*, Cupid has not visited our county the last season, and Hymen will gain but few new votaries on the approaching Christmas: or if otherwise, some of mama's articles are to be put in requisition to commence house-keeping; and carpets, hearth rugs, diaper, linens, and bed-quilts, are to made, or bought ready made, after the knot is tied, instead of the good old fashioned way of our grandmothers, who felt poor without a pillow case full of stockings, and a four foot chest full of linens, &c. We sincerely hope that the next annual exhibition of the society will excite a much greater interest among the daughters of Litchfield county, and that no female will attend simply to

see, but purposely to exhibit something to be seen and admired. From the Court House, we joined the society at the County House, and with the procession marched to the Episcopal Church, where the services were highly interesting and instructive. The address by S. R. CHILDS, M. D., was every thing which could be asked or expected upon such an occasion; and the fixed attention of a crowded audience—such an assemblage in a city would be puffed off as brilliant, and its beauties would get a compliment—proved the interest that was felt in the subject-matter of the discourse, and the manner of its delivery. From the Church, the Society repaired to S. Deming's dining hall, where a substantial dinner was served up, to which ample justice was speedily done by the hundred and one that sat down at the table.

Reports of the L. C. A. S.

The COMMITTEE ON NEAT CATTLE do award the following premiums, viz.

For the best bull, not under two years old, they have awarded to David Wadhams, for his two year old full blood Devon bull, \$6.00
To Charles Jones, for the 2d best, a half blood Devon, 4.00
To Lemuel Hurlbut, for the best milch Cow, a half blood Devon, 4.00
To J. R. Landon, for the 2d best native cow, 3.00
To Lemuel Hurlbut, for the best two year old heifer, a 3-4 blood Devon, 3.00
To Samuel Guernsey, for the 2d best, a half blood Devon, 2.00
To David Wadhams, for the best yearling heifer, a 3-4 blood Devon, 2.00
To Amos Moss, for the best bull calf, 2.00
For the best lot of calves, not less than four in number, they awarded to Lemuel Hurlbut, for his lot of 3-4, 7-8, and full blooded Devon calves, 4.00
To Benjamin Webster, for the best yoke of oxen, 8.00
To George Jerome, for the 2d best, 6.00
To Samuel W. Baldwin, for the best yoke of three year old steers, 5.00
To Anthony Guernsey, for the best pair of two year old steers, 4.00
To George Jerome, for the 2d best, 2.00
To Col. Marsh, for the best pair of yearling steers, 3.00
To Solomon Marsh, for the best fat ox, 5.00
To George Buel and others, for a team containing about sixty yoke of fine oxen, and a cart neatly rigged, with a handsome display of farming utensils, &c. 8.00
To Capt. Baldwin and others, for the 2d best, 6.00

The Committee would remark, that the finest pair of three year old steers they ever saw, in point of symmetry of form, size, colour, &c., were exhibited by Lemuel Hurlbut. They were sired by his full blood Devon bull Holkham, but were not offered for a premium.

They would also remark, that a lot of twenty-eight head of young Devon cattle, exhibited by Mr. L. Hurlbut, exceeded any thing of the kind ever exhibited at any previous show; and they noticed, with no small degree of pleasure, the great improvements there has been made in the breed of neat cattle since the commencement of this society, and that at no former exhibition has there been exhibited so great a collection of beautiful cattle as at this.

RUSSELL C. ABERNETHY, *Chairman*.

The COMMITTEE ON HORSES and other DOMESTIC ANIMALS, award the following premiums, viz.

To Oliver S. Wolcott, of Litchfield, for the best Stallion, (having reference to stock,) \$6.00
To Rob Roy, by Duroc, a three year old, 6.00
To Lyman Howe, of Goshen, for the best three year old colt, 5.00

To Oliver S. Wolcott, for the best two year old colt, Gunpowder, by American Eclipse, 4.00
To Benjamin Webster, for the best Boar Pig, 3.00

JOHN R. LANDON, *Chairman*.

MR. SMITH'S COTTON PLANTER.

MR. SKINNER,

The improvements which I have lately made in the "Cotton Planter and Cultivator," I will now describe. Although my cotton, and likewise the crops of several of my neighbours, were put in with the machine this year; and I may also add were the only crops which came up well, owing to the earth being pressed to the seed by the roller, which thus retained what little moisture existed, and prevented the ill effects of the disastrous drought which soon set in—yet the experience derived from this year's practice, has pointed out several defects, which, after much attention, I have fully remedied.

For a few days it performed well; but the friction of the axle between the hopper and box, soon wore it away so as to become too loose, and thus pass too many seed at once. The box is now dispensed with, and the axle is fixed to the break by cleats, unconnected with the hopper, and so contrived that the ashes or plaister used in preparing the seed cannot get to the journals, as was the case before.

The sheet iron clapper was soon cut through by the teeth, and the teeth also worn away. The clapper is now made of pine, with a batton of hard wood running lengthwise, against which the wires play. This will last several years, and when gone may be renewed by any carpenter in half an hour.

A difficulty occurred in moving the machine backwards by the wires coming in contact with the clapper, and thus tore it loose from the linen. This is remedied by causing the sheave to revolve on the axle when drawn back, but carries the axle along with it if moved forward.

The coulter was found to be too light when used in rough land; it is now made entirely of wrought and cast iron.

The Cultivators were also too light; they are now entirely of cast iron, made strong and heavy, with extra points, which can be renewed. With these, an entire new operation is added, which makes it a valuable implement of husbandry, to every farmer. It consists in forming the list at one draught, preparatory for planting; thus evidently saving two thirds of the labour, and which it does as well, nay better than is performed in the ordinary way with the plough: besides, being now sufficiently heavy, the operator can guide it with accuracy in skinning off the grass and weeds from the plants when they first come up, breaking the ground within two inches of them on each side.

Instead of the leather band, which soon became slack and interrupted the operation, a chain of wove wire is now used, which *never can slip*.

I have also adapted it to plant corn, which it performs equally well, passing three or four seed at once, regularly two feet apart, or at any distance required.

I have also adapted it to drilling lucerne, turnip, or any other small seed, which it either deposits at regular distances, or strews along the drill.

In a word, this machine first forms the list preparatory for corn, cotton, potatoes, or any other crop for which a list is requisite. It then opens the ground, drops the seed in any quantity, and at any distance required; covers it, and rolls it at one operation. When the plants are up, the Cultivators are applied so as to clean them of grass and weeds, on both sides at once. This done, they are afterwards changed so as to return the earth to the plants, or hill them from row to row. In each separate operation it performs about eight acres per

day. In every part it is made strong and durable, an important consideration when it is to be managed by negroes, and so simple, that any stupid fellow will understand all the fixtures in half an hour.

These improvements have increased the cost of the machine. For the Cotton Planter and Cultivator, the price is \$25; for the additional fixtures for corn and small seeds, \$2.

Sinclair & Moore, of Baltimore, are alone authorized by me to construct them; and to prevent the possibility of mistake, they keep an operative machine with them as a model, and which may be seen at any time at their ware room, near Pratt-street wharf.

The machine being now much improved, I advise those who purchased it last spring, to send it to Sinclair & Moore, to be altered as far as practicable according to the present plan, without any charge for patent right. For the information of those who may hereafter purchase it, I give the following directions

DIRECTIONS.

The land being first broken by the plough, the first operation is to throw up a list preparatory for planting. Remove the hopper, band, axle, and roller, tie up the coverer, and fix the cultivators in the two outside mortices, the mould boards facing each other. The screw bolts which confined the arms of the roller to the break, serve also to fasten the braces of the cultivators—set the coulter to the proper depth and proceed. After the land is listed, restore the hopper, band, axle and roller. Soak the seed in water, if two or three days the better, and stir in ashes, plaister or lime, until they separate. Then let the machine pass along the list: if drawn by one horse, he walks on the top—but it is better to apply two, as they pursue the water furrows and carry it more steadily. As you turn, take care to loop up the coverer. After the crop is planted, and as soon as the plants begin to break ground, remove the coulter, hopper, &c.—and fix the cultivators to the inside mortices, the mould boards from each other, and proceed to give the first dressing; here two horses must be used. Fix your attention on the wheels to keep them to the water furrows. This done, as soon as practicable, hill the plants by changing the shares, as in the first instance, when listing: this course is to be repeated until the plants are too high. If you would lessen the quantity of seed passed at once, you have only to shorten the wires, and fill up the space in the throat with a bit of leather.

For planting corn, you have to use the corn axle, with the brush screwed to the front of the hopper, and for small seeds you are to use the tin barrel.

You can regulate the distance by using a larger or smaller sheave. FRANCIS H. SMITH.

CULTURE OF HOPS.

The following directions for the culture and curing of Hops, are taken from the Transactions of the Agricultural Society of New-York.]

A rich, deep soil, rather inclining to moisture, is, on the whole, the best adapted to the cultivation of hops, but it is observable that in stiff clay (only excepted,) will suit them better than in any other soil when properly prepared; and in some parts of Great Britain they use the bog ground, or peat soil, or little else. The ground on which hops are to be planted, should be made rich with that which is the best adapted to the soil, and rendered loose and mellow by being ploughed deep and harrowed. The hills should be at the distance of four or five feet from each other, according to the nature of the ground. On a good soil, the plants will grow before the first frost.

At the first operation, the sprouts should be cut off at the base, and the roots should be cut off at the base.

of the roots of hops, must be obtained from hops that are thought the best,* cut off from the main stalk or root, six or eight inches in length. Branches, or suckers, most healthy, and of the last year's growth, must be sought for. They may easily be known by their looking white. Two or three joints or buds should be left on each set. The sets should be put into the ground as soon as taken up, if possible; if not, they should be wrapped in a cloth, kept in a moist place, excluded from the air. A hole should then be made, large and deep, and filled with rich mellow earth. The sprouts should be set in this earth, with the bud upwards, and the ground pressed close round them. If the buds have begun to open, the uppermost must be left just out of the ground; otherwise, cover it with the earth an inch. Two or three sets to a pole will be sufficient, and three poles to a hill will be found most productive. Place one of the poles to the north, the other two at equal distance, about two feet apart. The sets are to be placed in the same manner as the poles, that they may the easier climb. The length of the poles may be from fourteen to eighteen feet, according as the soil is for richness. The poles should be placed inclining towards each other, so as to meet at the top, where they may be tied. This is contrary to the European method, but will be found best in America. In this way they will strengthen and support each other, and form so great a defence against the violent gusts of wind to which our climate is so frequently subject in the months of July and August, as to prevent their being blown down. They will likewise form a three-sided pyramid, which will have the greatest possible advantage from the sun. It is suggested by experience, that hops which grow near the ground are the best. Too long poles are not good, and care should be taken that the vines do not run beyond the poles: twisting off their tops will prevent it. The best kinds of wood for poles, are the alder, ash, birch, elm, chestnut, and cedar. Their durability is directly the reverse of the order in which they stand, and burning the end put into the ground, will be of service to preserve them. Hops should not be polled till the spring of the second year, and then not till they have been dressed. All that is necessary for the first year, is to keep the hops free from weeds, and the ground light and mellow, by hoeing often, and ploughing, if the yard is large enough to require it. The vines, when run to the length of four or five feet, should be twisted together to prevent their bearing the first year, for that would injure them. In the months of March or April, of the second year, the hills must be opened, and all the sprouts, or suckers, cut off within an inch of the old root, but that must be left entire with the roots that run down; then cover the hills with fine earth and manure. The hops must be kept free from weeds, and the ground mellow, by hoeing often through the season, and hills of earth gradually raised around the vines during the summer. The vines must be assisted in running on the poles with woollen yarn, suffering them to run with the sun.

*Of the different kinds of hops, the long white is most esteemed. It yields the greatest quantity, and is most beautiful. The beauty of hops consists in their being of a pale bright green colour. Care must be taken to obtain all of one sort; but if different sorts are used, they must be kept separate in the field; for there is in different kinds of hops a material difference in their time of ripening; and if intermixed, will occasion extra trouble in gathering.

†Hops must be dressed every year as soon as the frost will permit. On this being well done, depends in a great measure the success of the crop. It is thought by many that the best method to manure the hop yard is in the fall, to cover the hills entirely with manure; asserting that this prevents the frosts from injuring the roots, and that the manure, by its truth of covering, keeps the soil warm in winter, and in the spring.

By the last of August, or first of September, the hops will ripen and be fit to gather. This may easily be known by their colour changing, and having a fragrant smell; their seed grows brown and hard. As soon as ripe, they must be gathered without delay, for a storm or frost will injure them materially. The most expedient method of picking hops, is to cut the vines three feet from the ground, pull up the poles, and lay them on crotches horizontally, at a height that may be conveniently reached. Put under them a bin of equal length, and four may stand on each side to pick at a time. Fair weather must be taken to gather hops in, if possible; and hops ought not to be gathered when the dew is on them, for dew is apt to make them mould. They should be dried as soon as possible after they are gathered; if not immediately, they must be spread on a floor to prevent their changing colour. The best mode of drying them is with a fire of charcoal, on a kiln covered with hair cloth, in the manner of a malt kiln. The fire must be kept steady and equal, and the hops stirred gently. Great attention is necessary in this part of the business, that the hops be uniformly and sufficiently dried; if too much dried, they will look brown, as if they were burnt, and if too little dried, they will lose their colour and flavour. They should be laid on the hair cloth about six inches thick, after it has been moderately warmed; then a steady fire kept up till the hops are nearly dry, lest the moisture or sweat that the fire has raised, should fall back, and change their colour. After the hops have been in this situation seven, eight, or nine hours, and have got through sweating, and when struck with a stick, will leap up, then throw them into a heap; mix them well, and spread them again, and let them remain till they are all equally dry. While they are in the sweat, it will be best not to move them for fear of burning them. Sacken the fire when the hops are to be turned, and increase it afterwards. Hops are fully dried when their inner stalks break short, and their leaves crisp and fall off easily. They will crackle a little when their seeds are bursting, and then they must be taken from the kiln. Hops that are dried in the sun lose their rich flavour, and if under cover, they are apt to ferment and change with the weather, and lose their strength. Fire preserves the colour and flavour of the hops, by evaporating the water, and retaining the oil of the hops. After the hops are taken from the kiln, they should be laid in a heap to acquire a little moisture, to fit them for bagging. It would be well to exclude them from the air by covering them with blankets. Three or four days will be sufficient for them to lie in that state.

HORTICULTURE.

(From the Technical Repository.)

OBSERVATIONS ON THE CULTURE OF SILK,

By the late Archibald Stephenson, Esq., of Mongre-nan, in Ayrshire.

(Concluded from page 302.)

Here I might have given the dimensions of the Italian reel for winding off the silk, being the same which is used for that purpose in France; but that becomes unnecessary, as I find that the Society are already in the possession of a model of it. I shall therefore proceed to mention sundry notions which relate to the winding off the silk.

Spring water or rain water, as being the only proper water to be used in the basin. Draw well water is altogether improper for this purpose, because it is hard, and does not properly dissolve the gum which is naturally upon the silk.

The water in the basin must be wholly changed twice a day, it is filled in the morning before setting, and in the evening before the next morning.

the people go to dinner, as it requires some time to make it boil.

When you first put the cocoons into the hot water, if the silk rises thick upon the brush, it is a proof that the water is too hot. If you cannot catch the threads of silk with the brush, it is a sign that the water is too cold.

When the cocoons are in play, if they rise often to the little iron conductors, it is a proof that the water is too hot. If the cocoons will not follow the thread, it is a sign that the water is too cold. By attending to these observations, you can easily manage so as to give that degree of heat to the water that is proper for the cocoons.

If there should happen to be any sand amongst the water in the basin, the heat makes it rise to the surface, where it fixes itself upon the cocoons. This is easily known, because where there is any sand upon the cocoons, it makes the thread break, as if cut with a knife. For this reason the utmost care must be taken to guard against it, by cleaning the basin with the greatest attention. The fear of having sand is one of the reasons for changing the water of the basin at mid-day, and even oftener, if found to be necessary. When they find that there is a little sand, and that they wish to avoid changing the water, on account of the loss of time which that operation requires, as the water must be boiling before you can go on with the winding; I say, in this last case, they cover the face of the brush all over with a parcel of the coarse silk, which is laid aside, and you then put the face of the brush into the water, making it reach the bottom of the basin, along which you draw the brush gently, to catch hold of the sand with the coarse silk, to which it will immediately cling when it comes in contact with it. You then drag the brush gently up the side of the basin, and thus bring out the sand along with it. This operation, several times repeated, cleans your basin of the sand, without your being put to the trouble and loss of time in changing the water.

Take care to keep up your fire under the basin in such a manner, as to secure having the water always of the same degree of heat, and to throw in your addition of cold water by little and little at a time, so as to make as little odds as possible in the degree of heat. When you throw in too much cold water at a time, so as to alter the requisite degree of heat, the silk of the cocoons which are in the basin at that time, loses its colour, and grows perfectly pale; which silk, so rendered pale, it is said will not take any dye properly, which by that means diminishes the value of your silk.

In beating the cocoons in the basin with the brush, you must carry your hand as light as possible, so as just to touch the cocoons slightly. If you beat too hard, the threads of silk, in place of coming off singly, cling together in lumps, which, as it prevents its winding off, occasions the loss of the silk, as it will then only answer as waste silk.

When you take the fine threads to throw them to that which is winding off, they must not overlap your finger more than an inch; if too long, they will not join well, but hang down and occasion a lump, which causes the thread to break, as it is then too large to pass through the eye of the little iron conductor.

In winding off the silk you must be attentive to keep the thread wet, to make it slip along more easily towards the reel. And when the wheel has remained any time idle, you must also wet all the thread betwixt the basin and two pieces of iron, which makes the thread run the more easily.

Be attentive, also, from time to time, to wet with water the cord, and the little wooden wheel which moves the wooden regulator, in order to make it act properly. If this is neglected, the cord, by being dry, will not turn the regulator as it ought, by which means the silk will be placed unequally upon

the reel, which may have this farther disadvantage to cause the silk threads upon the reel to cling and stick to each other, by having been brought into contact before the first threads have had time to dry. For that wooden regulator is calculated to place the threads in such a manner upon the wheel, as to make them touch one another only obliquely, and in as few places as possible at first, that the silk as it comes from the cocoons may have the time requisite to dry, before it comes to be fully in contact with that which follows. When the silk threads cling together, by being too soon brought into contact, the silk is rendered good for nothing.

The cocoons called *sattiny*, from their resemblance to satin, require only that the water should be moderately hot in the basin. The same degree of heat that is necessary for the fine cocoons, would entirely spoil the others by making the silk come off thick, and what they call *bourry*. You find out the degree of heat necessary for these, by examining with care in what manner the silk comes off from the first quantity of cocoons you put into the basin; and if you find it comes off thick, you must add cold water by degrees, till you find the just proportion for them. They must not be allowed to remain long in the hot water, and there should only be a few of these cocoons put into the water at a time. If these circumstances are not attended to, the silk comes off thick, as already mentioned, which, in winding, makes the thread break at every moment, and not only greatly diminishes the quantity of your silk upon the reel, but also considerably hurts its quality, by rendering it coarser.

When once the reel has the quantity of silk upon it you judge to be sufficient, the produce of about three pounds of cocoons, for example, you take it off, and put another reel in its place, that the work may not be interrupted. The silk ought to remain for six or eight hours, or even more, if you can allow it with your convenience, as it ought to be perfectly dry before it is taken from the reel.

When the cocoons which are first put into the basin are nearly finished, you must cause the wheel to be stopped; at which time, with a ladle, full of holes like a drainer, you take out the cocoons which were in play, each parcel on the opposite side. They are put into plates kept at the side of the furnace for that purpose; and are taken out of the basin for the following two reasons: first, that they may not be mixed with the new cocoons, which are put into the basin to be prepared for winding, as already mentioned; secondly, because if these cocoons, which are already in part wound off, were left in the boiling water till the new ones are prepared, it would have the effect to prevent the silk from winding off from the cocoons with that despatch and propriety which is necessary in that operation.

As soon as you observe that the silk is wound off from the cocoon, you must take out the bottom of the cocoon containing the insect from the basin and throw it aside; because, if left in the basin, it will spoil the water, and consequently destroy the colour of the silk.

You must be at pains to keep an equal number of cocoons working at each end of the basin, in order to keep the thread of silk of an equal size. When you have fewer on one side than on the other, the silk becomes smaller at that side, of course, which also has the effect to break the thread. In order to keep the thread at both sides of an equal size, you must throw in the cocoons, one by one, and never more than two at a time. If you throw in many together, for example, four or five at once, it throws the weight to that side, when the thread immediately breaks, because by that means the equilibrium is lost.

In putting the silk thread round the two little pieces of wire, for conducting it to the reel, fixed to the little wooden wheel, you must turn the thread

round to the right hand for the bit of wire placed on the right; and turn it round to the left hand, for the piece of wire placed on the left. In mentioning the right and left, I mean the right and left hand of the woman as she sits managing the cocoons in the basin.

The quicker the motion of the wheel is, the better the silk winds off, and the better the ends join to the thread, which is, indeed, one of the great reasons that makes it wind off well. One might be apt to imagine that the rapidity of the motion might overstrain and break the thread, but from constant experience it has been found that the thread never once breaks from the rapidity of the motion; but, on the contrary, that the quicker the motion is, the more advantageous it is for winding the silk.

When you have put the quantity of silk upon the reel which you think proper, you then pick and clean off all the loose silk with your fingers; after which you take a little handful of the coarse silk, and after washing it to make it thoroughly clean, and squeezing it, you must dip it in some cold clean water, with which, in the flat of your hand, you rub over the silk upon the reel, a great many different times, all round the reel, stroking up also the silk with the flat or palm of your hand. After which you then pour some clear cold water also upon the silk; and you then turn round the reel with all the velocity in your power, for about eight or ten minutes, in order to shake off all the water effectually; which done, you take off the reel, and put it in some airy place to dry; but you must not expose it to the sun, which would quite eat away and spoil the colour. This is done to clean the silk effectually, and to give it a gloss.

In preparing the double cocoons for winding off, they put more of them into the basin at once than of the finest kind. But before putting them into the basin, they must be well cleaned from all the floss, or waste silk, which is on the outside of them, that they may properly play in the basin. The water also must be boiling hot; and as the silk they yield is of a coarser quality than the other, and has a good deal of the floss silk, or *bour* upon it, the girl who turns the wheel takes the opportunity, while the other woman is preparing the cocoons in the basin for winding, to clean and pick off the loose silk from that which is already on the reel.

In winding off the fine silk, there are always two hanks of silk put upon the reel at the same time. But in winding off the silk from the double cocoons, they confine themselves to one hank only at a time upon the reel.

The next object which occurs, is the method observed by the French, in the preparation of their floss, or waste silk, which they call *piloselle*; and which they do in the following manner. All the cocoons which have been pierced by the butterflies being collected together, they add to these all the light cocoons, which they judge to be improper for winding off, after the insects have been cut out, as before mentioned; and to these they also add all the bottoms of the cocoons which had been thrown aside from the basin, after winding off their silk.

Such of the floss silk as you wish should retain the yellow colour, you put into a large copper kettle, and cause a person to tramp it with her bare feet, in the same manner as the women in some parts of Scotland tramp their linens when they are washing them. From time to time they turn the cocoons upside down with their hands, and so go on tramping them again with their feet. This operation is continued for nearly two hours together, turning them, and giving them a little more fresh water from time to time, till it is found that the silk of the cocoons separates properly, upon tedding it out with your fingers; and as, in tramping with the feet, the edges of the heap of the cocoons will very often escape the stroke of the foot, you turn the edges into the middle, from time to time, to receive

the benefit of the trampling equally with the rest. When you find it properly separated, you carry it to the river; put the cocoons into a clean cloth tied up, to prevent the silk from mixing together. You then pour fresh water upon them from time to time, till you find that the water runs off from the silk perfectly clear, without being tinged with any sort of colour. When you find this to be the case, you spread out the silk to dry by the sun; and when it is thoroughly dry, the operation is completed.

Such waste silk as you wish to have white, is treated in the following manner: you first put the cocoons into a kettle of cold water, in which you let them lie for twenty-four hours; after which you take a quantity of water, such as you judge to be sufficient for boiling your cocoons, and for covering them properly, which you put into a copper kettle. In this water you dissolve some good soap, giving at the rate of a quarter of a pound of soap for every pound of cocoons you intend to boil; and when the soap is thoroughly dissolved, you tie up your cocoons in a clean cloth, to prevent the silk from running together, and so put them in this manner into the kettle; when you boil them together till you see that the cocoons are grown white, taking care during the time they are upon the fire to keep the cocoons down amongst the water with a stick, that they may all be boiled equally together. When you find that they are abundantly white, you take them out and carry them to the river, and wash them as you did the other, till the water which comes from them is perfectly clear; after which you spread them out, and dry them, as before directed, in the sun.

Though the prices of the waste silk, prepared in the two different manners above mentioned, are generally the same; yet the merchant rather prefers the silk cleaned by means of the cold water to that which is boiled, alleging that the first loses less of its natural gum than that which is boiled, and for that reason, that the first takes all manner of dyes better than the other.

Though not in its proper place, I must beg to take notice of the following particular. As I could not, during the last of the years I resided at Montauban, get myself provided in my neighbourhood with a full quantity of leaves I then wanted. I found myself obliged to purchase the produce of several trees which grew at the distance of above a mile from my own house. The leaves were first gathered as usual in small baskets, and then put into sacks, in which last they were brought home to me.

But as this necessarily required their lying for some time in the sacks, I observed that in general when they came to hand, this had occasioned the leaves to heat, and sweat considerably. They appeared perfectly wet when turned out of the sacks. Having an excellent dry vault or cellar, which I set apart for keeping my leaves, I had them spread upon the floor of this cellar having been previously

thoroughly cleared as possible.

But to turn to the method of drying the silk.

Continually, by the sun, it is dried.

Before descending into the cellar, the silk is dried.

And is carried to the cellar in the gentlest manner.

And is then spread upon the floor of the cellar.

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view, as a great deal of the gross moisture of the leaves might, by that means, be discharged before they should be given to the worms; and, indeed, that seems to be the more necessary in the present state of our mulberry plantations, the most of our trees, as far as I have been able to learn, being planted in garden grounds highly manured, which of course renders the leaves too rich and succulent to form in this natural state a proper food for the worms; nay, in France, as already observed, they are regarded as highly dangerous for that insect. Would it not, therefore, be proper, if the Society should be pleased to recommend this matter to be fully examined by experiments, to have the truth ascertained, as it is certainly of importance, that the most wholesome food should be provided for the use of the worms.

Wishing to know what was judged to be a reasonable return in silk, from an ounce of eggs, I took the opportunity to put that question to a gentleman of great practice in this culture. His answer was, that he reckoned himself very well off when he had at the rate of five pounds of silk from an ounce of eggs; though he said he had sometimes got six, seven, eight, and even nine pounds per ounce; nay, he had known others get as far as ten pounds per ounce. But he repeated, that he thought a man had full reason to be satisfied with five pounds of silk per ounce, more especially if his quantity of worms was large; as the larger the quantity of worms, the return of silk must be less in proportion, as it was utterly impossible to pay the same just and accurate attention to the culture of a very large number, that can certainly be given to a smaller quantity.

Here I shall beg leave to add a few general remarks. That it is computed in France, that it takes two hundred and twenty cocoons, when tolerably good, to weigh one pound.

That the number of worms requisite to produce one quintal of cocoons, will require from twenty-two to twenty-three quintals of leaves for their food.

That one quintal of cocoons will yield only from nine to ten pounds of spun silk.

That the cocoons, one year with another, sell for twenty-five sols per pound.

That the spun silk, when thoroughly cleaned and prepared for the loom, will be diminished in quantity nearly one fourth. And,

That a pound of spun silk, one year with another, sells in France for twenty-five livres.

I shall close these observations, by begging leave to throw it under the attention of the Society, whether it might not considerably promote the object they have in view, to encourage the two following particulars; the first, the forming plantations of the white mulberry tree upon the soil which has been found in France to be the most proper for this purpose; namely, upon gravel or sand, which ought to be thoroughly cultivated yearly, but without suffering any manure to be put upon it. And the other, the raising the white mulberry tree annually from seed, which is undoubtedly the quickest and most expeditious way of getting a proper supply of these trees; and which will have this additional advantage, as by this means a continued succession of tender young leaves will be obtained for the use of the worms in their early state, as these are beyond a doubt the best food for them till they have got over their first two ages.

Along with the foregoing observations, I think it may not be improper to mention the following particulars which I have observed.

That upon the first two ages, the silk worms occupy

but about two stages of the whole, on account of

their being so small, and from the little room they

take up, succeed to the wish of the fabricateur, who

flatters himself with the hopes of a happy result.

The third age arrives, when the silk worms are

increased one eighth part more in size, and will

then occupy sixteen stages. From that moment

the fabricateur becomes the cruel destroyer of his

own prospects. He shuts the door and window,

caulks up every crevice with more care than ever,

which could admit the least degree of exterior air.

gentleman already mentioned more than once in the foregoing observations, with a view to trace out the faults of that management, and to endeavour, if possible to remove them, carried on a course of experiments; during no less than eighteen years successively, before I went into that country, by means of which he was satisfied he had traced the evil to the bottom; and insisted that their want of success in that culture was entirely owing to the causes following, namely: that proper attention was not paid to that cleanliness which was absolutely requisite to keep the worms in health and vigour; secondly, that the practice was to crowd the worms most improperly into too small bounds; and, thirdly, that they absolutely destroyed all hopes of success, by keeping their worms too close, by excluding all external air, which had the effect to render the air of the room perfectly noxious and destructive to the worms; which of course occasioned a great mortality to these insects. Upon this subject he prepared a memorial, to be laid before the French minister, of which he favoured me with a perusal, and from which I took notes, which enable me to lay before the Society the substance of that memorial, which was couched nearly in the following terms:

Monsieur Marteloy began his memorial by representing to the minister, that if a *fabricateur* (the person who employs himself in the culture of silk,) has got a room fifteen feet high, eighteen feet broad, and eighteen feet long, he has not the least difficulty to make use of twenty ounces of eggs, which, if tolerably good, ought to produce eight hundred thousand worms; and these, when come to maturity, he observed, would be of the size of a man's finger, and could never be possibly contained in one room of the above dimensions, if this insect, like all other creatures, was not accustomed to die at all different ages. I suppose then, said Monsieur Marteloy, that at their fourth age or malady, the half shall have perished, by which means there remain four hundred thousand, a number still far too great to be properly contained in a room of this size, if one attends to this circumstance, that this space of one foot square is necessary to contain properly one hundred worms. The multiplicity, therefore, of the stages in this case, will be so great, that they will nearly touch one another. In fine, the place will be no better than a great mass of stages of filth, and insects, which must produce an infected air. Add to this the cruel usage of keeping the room close shut up, the exterior air by this means being absolutely excluded; and as to the internal air, in which there is scarce a probability of breathing, they try to correct it by fumigations, which in fact only add to the calamity.

During the first two ages, the silk worms occupy but about two stages of the whole, on account of their being so small, and from the little room they take up, succeed to the wish of the fabricateur, who flatters himself with the hopes of a happy result.

The third age arrives, when the silk worms are increased one eighth part more in size, and will then occupy sixteen stages. From that moment the fabricateur becomes the cruel destroyer of his own prospects. He shuts the door and window, caulks up every crevice with more care than ever, which could admit the least degree of exterior air. He heats the room at great expense, and actually suffocates his worms by the force of fumigating.

During the first two ages there is not an absolute necessity of having fresh air introduced into the room, since the worms scarce occupy at that time a twentieth part of the room, the silk dries of itself, it is not being above a half an inch and a half most; but the things is changed at the third age, as we have already said, &c then occupy sixteen stages, and every day increase in size, till the time of their maturity, when filth and insects are introduced into the room.

the great quantity of leaves they eat, and by their excrement. During the continuance of that age, the litter will increase to the amount of five or six inches. The interior air, full of a poisonous humidity, which evaporates from the worms, leaves, and excrement, prevents the litter from drying; always wet, it presently heats, and the silk worms being no longer dry, begin by losing their vivacity, and end by a distaste of their victuals, even when the best chosen.

Sometimes the insect, well-conditioned and vigorous, keeps up against all these evils during the third age, and sometimes even gets over the fourth; but the moment of maturity, or of mounting, being come—oppressed, and infected at last by so many evils, it can support it no longer. In vain the fabricateur expects to be paid for his labour, his worms, which have lived in that prepared pestilence, if it may be so called, refuse to mount in order to make their cocoons; the fabricateur, anxious for the success of his crop of silk, endeavours to assist them with his hands, which evidently increases their distress. Unable to support themselves upon the branches, they descend, or tumble down, and do nothing but throw out some little threads of silk, without design. In fine, they have not the strength to form the rich tomb in which they ought to shut themselves up, in order to propagate their species.

In that sorrowful and tragic condition, the master sees his entire ruin! In despair he betakes himself to remedies, and the fumigations totally complete the destruction of the whole.

The poorest villages, where the houses consist only of so many huts, ready to tumble to pieces, turn out to be the places where they have the richest and the most certain crops. These habitations, almost entirely open, in spite of all the care to shut them up during that operation, have always crevices sufficient to admit a fresh circulation of air, which is the true cause of their success. Their richer neighbours, better lodged, and consequently better shut up, astonished at the happy success of these poor people, call them in to be directors of the management of their silk worms. These newcomers, transplanted into the more commodious, but less healthy houses, have no longer the same advantages they enjoyed in their own shattered habitations, and consequently have no better success than those who called for their assistance. The low class of people carry their stupidity to such a height as not to be sensible in what consisted the advantages of their own open houses, which, unknown to themselves, kept up always a continued circulation of fresh air. They commonly attribute this want of success in these operations to foreign causes, to cold, to heat, to the air of that particular spot, to particular winds which may happen to reign at that time, to the nature of the soil, to the quantity of the mulberry leaves, to the woman who attends the worms being in a certain situation at that time; and such other ridiculous causes, without any meaning.

From the foregoing narrative of the ills which attend the present practice of cultivating the silk worm, one may with justice condemn it as highly improper and ruinous. A gentleman, desirous to find out the true causes of the want of success in this lucrative branch of commerce, was at the utmost pains, for several years together, to examine into the management of those employed in this article through a great part of Languedoc. Suspecting that the want of success in the present management might proceed from want of cleanliness, and want of fresh air, he began by small experiments, which but the more confirmed him in that suspicion. With a constant attention in keeping them clean, that is, taking away the litter very frequently, to prevent all humidity and danger of fermentation of the litter, he, for the space of eighteen

years together, went on, by little and little, giving always a larger degree of fresh air in every new experiment, till at last he found, that after the second age the insect was hardly enough to be reared in the open air altogether; and that by treating them in this manner, he entirely avoided all the distempers to which this insect was liable, when treated by the former practice, and never failed to have a plentiful crop.

The pernicious method hitherto used in the culture of the silk worm has not only been the cause of the many distempers to which that insect is liable in France, and the great mortality which happens yearly amongst them; it has still been attended with worse consequences; for women, who have children at the breast, being often employed to attend the silk worms, and give them their food, &c., the milk of these women has been but too often affected by the pestilential air of the confined rooms, which has yearly cost the lives of many of the children. It has been remarked, that for many years past, numbers of children at the breast, have died yearly in those parts of the country where they rear numbers of the silk worms, particularly at Tiers, Narbonne, Castrie, &c. The time of rearing the silk worm is not the season of fruit, nor the time when the earth requires great labour, as at that time almost all the crops of every kind are in their infancy. One cannot then attribute that mortality amongst the children at the breast to any of the above causes, but solely to the nurses being in the habit of attending the silk worms for several weeks together, in that close and pestilential air above mentioned. It has been remarked, that all those, either men or women, who are employed in attending the silk worms, who have any kind of simple wounds, that those wounds have turned into incurable ulcers.

Is it then extraordinary that nurses, who pass three weeks together at the hardest work, and in the most infected air, should give a kind of pestilential milk, which occasions that mortality amongst the children? They are seen, after that hard labour, to be in a languishing condition themselves, for several months together. That kind of jaundice which attacks those women who ordinarily have the charge of attending the silk worms, does it not evidently demonstrate the cause of their illness? The excess of labour might well occasion their growing meagre; but it does not ordinarily give that livid yellow colour which we remark always in those who raise large quantities of the silk worms. That method of culture ought then to be avoided, as being evidently so prejudicial to the human health; and the new method, before pointed out, should certainly be followed; as the continual circulation of fresh air not only prevents all those bad effects upon the health of those persons who are employed in rearing the silk worm, but also secures a certain and rich crop of silk, by keeping the worms always in full health and vigour.

In consequence of the foregoing memorial, the states of Languedoc, upon the recommendation of the minister, appointed an experiment in the open air, to be carried on publicly in the garden belonging to the Jesuit's College at Montpellier, under the direction of Monsieur Marteloy, and ordered the sum of twelve hundred livres to be paid to him, for defraying the expenses of it. This experiment was accordingly carried into execution in 1764: and as I happened to reside at that time at Montpellier, I regularly, during the whole course of it, attended to its progress twice a day, taking care as regularly to mark down in my notes the state of the weather daily, and every other occurrence which seemed to demand my attention. This experiment naturally drew to it the public notice, and the people engaged in that culture flocked in from every quarter to observe the result. To their no small astonishment, the experiment succeeded in the most perfect man-

ner! And the report of its success having been made to the minister, the states of Languedoc were advised by him to order a second experiment of the same kind to be made the year following; which they accordingly did, appointing Monsieur Marteloy again to conduct it, to whom they ordered eighteen hundred livres to be paid for defraying the expenses of it. Here it is to be remarked, that eight pounds and a quarter of the cocoons, raised in this first public experiment in the open air at Montpellier, yielded a pound of silk; whereas it required twelve pounds of the cocoons, raised the very same season in the house, to yield a pound of silk.

The second experiment, carried on publicly in the open air, took place in 1765, which I likewise attended with the same punctuality. It had, however, a very different issue from the former; for that second season having turned out uncommonly cold and wet, the worms, though the top of the stage was roofed with boards to throw off the wet, like our sheds in England, were frequently drenched with the rain; and at the most critical time of their growth, namely, from their having got over their fourth malady, to the time of their mounting, the heavy rains continuing almost incessantly, laid Monsieur Marteloy under the unavoidable necessity of giving them their food wet, as there was not the least possibility of getting the leaves dried. The consequence was, that the experiment failed; but, indeed, not more so than this culture failed almost every where else in Languedoc, where the worms were all reared in houses; owing, without doubt, to the extreme wetness of the season.

Though this last failure put an end to any further attempts to raise the worms in the open air, the consequences, however, of these two experiments, were yet productive of great advantages to the country; for many of the people engaged in that culture, having been made perfectly sensible of the great errors in their former management, were led to adopt the alterations recommended by Monsieur Marteloy; namely, not to overcrowd their worms as formerly; to observe more cleanness, by frequently clearing away the litter; and, lastly, by taking care to preserve the air of the rooms always sweet by a continual circulation of fresh air; which certainly form very material alterations in their practice for the better.

Whether owing to Monsieur Marteloy's experiments, or not, I will not pretend to say; but certain it is, that at this time a spirit for extending the silk culture greatly spread itself all over Languedoc. Amongst those who distinguished themselves the most, were the proprietors of the Royal Canal of Languedoc. As these gentlemen were proprietors of both the banks of the canal, for the purposes of their navigation, they formed the spirited resolution of planting entirely with the seedling white mulberry the whole banks of the canal, from one end to the other, which, from the town of Agde to Toulouse, forms a stretch of nearly one hundred and twenty miles.

The care of carrying into execution these extensive plantations they committed to Monsieur Marteloy, upon whom they settled a handsome appointment for defraying the expense of his living and travelling charges. And, with a view to fix his attention still the more closely to the duties of his charge, they likewise bound themselves by contract, to communicate to him a tenth share of the free profits of these plantations, for a certain number of years.

Nor was this all; for the same gentlemen carried their views of this kind still further. Being possessed of an extensive property in land, which at that time lay entirely open, they ordered the whole of it to be enclosed with hedges of the seedling white mulberry; and the carrying on this second operation they likewise trusted to the care of M

sieur Marteloy. These particulars I had from Monsieur Marteloy himself, whom in the autumn of 1767, I met with at Thoulouse; where I left him busily engaged in forwarding these spirited operations committed to his charge, which he told me were going on rapidly, as his employers liberally supplied him with the funds necessary for that purpose.

PRINCE'S FRUIT TREES.

Copy of a letter from the Hon. John Lowell, of Roxbury, President of the Massachusetts Agricultural Society, to William Prince, Esq., proprietor of the Linnæan Botanic Garden, Flushing, Long Island, near New York.

Roxbury, Nov. 16, 1826.

Messrs. WILLIAM PRINCE AND SON,

Gentlemen—I have recently received the last edition of your catalogue of fruit trees, flowering shrubs, bulbs, and hardy and tender flowering plants. I thank you for it most sincerely.—It is what I never even dared to hope for in our country during my life. It is, after comparing it carefully with the catalogues which I have received from Holland and France, a richer and nobler collection than can be found in any one catalogue from the most celebrated florists and nurseries of those countries.

Botany, as a science in America, is scarcely thirty years of age, and it could never attain, even with your importation of European Herbaria, any thing which could enable us to take rank with the botanists of Europe, without the advantage of extensive collections. In Europe these have been furnished by the munificence of princes, or the taste of men of overgrown fortunes. The gardens of Paris, of Upsal, of Kew, and of Liverpool, are all of them either national works, or the production of the united exertions of opulent cities. But if no such gardens had existed, what would have been the state of botanical knowledge? Confined, most certainly, to the five or six thousand plants of Europe, instead of being, as it now is, extended to the forty thousand plants of Asia, Africa, America, and Australasia.

In our country, the nation has done nothing towards the advancement of botanical science by extensive collections. The effort of the great state of New York was abortive, and the noble collection of Doctor Hosack has been suffered to go to destruction. Massachusetts has done better.—Her little collection has been fostered, and posterity will one day thank her statesmen for the feeble and limited support she has given to a science which is every day gaining ground in public favour. It was, indeed, a curious and humiliating reflection, that thirty years since we were obliged to resort to European writers to know the names of the grasses which we trampled under our feet, and of the trees which furnished us shade and fuel, and materials for architecture. That day of disgrace is passing away, and to you gentlemen, we owe no small tribute for the part which you have taken in effecting this change. Your collection of plants, from the American and foreign—your catalogue, and the scientific names, afford facilities which were formerly wanting.

As far as I am concerned, I am ever your most obedient servant. I am, Sir, your most obedient servant, J. LOWELL.

recently tested from your garden, have been correct.

Feeling as I do, that the taste for flowers, or rather to speak more extensively, the relish for the beauties of nature, is gaining ground in our country, as it must do; I could not refrain from expressing to you my thanks as an individual for the great share you have had in promoting this innocent and delightful taste. I am afraid you have gone ahead of your age, and have expended a capital in this ornamental part of gardening, which will be very slowly reimbursed, if ever; but it is clear that we should never make any advances without an establishment so convenient and so necessary as yours. There is one advantage which your garden enjoys, and which cannot readily be taken from you: the climate of Long Island is one which is adapted to furnish plants for all the Northern, and most of the Middle and Atlantic, as well as Western states. I most sincerely wish for yourselves success and remuneration; and for your country, your steady and spirited continuation of your efforts.

I have the honour to be

Gentlemen,

Respectfully yours,

J. LOWELL.

NATIVE GRAPE.

Franklin, (Tenn.) Nov. 30, 1826.

JOHN S. SKINNER, Esq.

In answer to an inquiry in a former number of the American Farmer, where Col. Ball's settlement on the Mississippi, &c., I am informed by an old gentleman who resided on the Mississippi, in his youth, that a Col. Ball resided on the left bank of the Mississippi, eleven leagues above New Orleans; that Ball, and most of his family, were massacred by the Indians, perhaps seventy years since. If any wine was made from the native grape, it was what is called the winter grape; it abounds in all the valleys of the Mississippi and its tributary streams, it is a hardy, vigorous vine, and the best species, (of which there are a variety,) gives bunches from six to nine inches long, the berries about half an inch in diameter, yielding from two and a half to three gallons of juice to the bushel of bunches. Gathered from the 20th October, to the 20th of November.

Respectfully yours,

J. FIELD.

LADIES' DEPARTMENT.

TULIPS.

(From Maddock's Florist's Directory.)

TULIPS are divided into two classes, viz: early and late blowers.

The late blowers are infinitely the finest and most valuable, and are of course entitled to the principal attention of the curious; they are, therefore, to be considered as the subject of the following remarks and observations.

They are divided into six distinct families, viz.

1. Primo baguets.
2. Baguet rigouts.
3. Incomparable verports.
4. Byblomens.
5. Roses.
6. Bizards.

Discover the original source of the tulip, and you will find it in the East. The tulip is a native of the East, and is cultivated in the gardens of the Persians, the Turks, and the Arabs. It is also cultivated in the gardens of the Romans, and the Greeks. The tulip is a hardy plant, and is well adapted to the climate of the United States. It is a beautiful flower, and is well adapted for the garden. It is a hardy plant, and is well adapted to the climate of the United States. It is a beautiful flower, and is well adapted for the garden.

The first four have white bottoms or grounds, and the bizards have yellow grounds.

The most proper time to plant tulip roots is from the end of October to the 10th of November, which is indeed pointed out by nature in the appearance of the grass or foliage at the upper end of the root, as is before observed of hyacinths.

The situation for the best bed should be in an open, airy part of the garden, when that is fixed upon, the ground should be marked out, agreeable to its intended dimensions, and the soil taken out twenty inches deep; the bottom is then to be filled up with sound fresh earth, ten inches thick, upon which is to be placed a stratum of two year old rotten cow dung, and earth of the above description, about one half of each, well mixed together, twelve inches thick; and again, upon this is to be placed another stratum of the same kind of earth as that of the bottom; this is only to be two inches thick at the sides, and three inches at the middle, which will give it a small degree of convexity; this is to be performed about the 20th October, i. e. a week or two before planting, to give the bed time to settle, at the expiration of two weeks the earth will have subsided, so as to be about two inches higher than the circumjacent paths; but if heavy rains intervene between this preparation of the bed and the time of planting, it will be proper to keep them off, in order to preserve the temperature of the earth, as it would be rendered too compact and adhesive, by a redundancy of moisture, for the fibres to pass freely through it, which ought to be avoided.

On the day made choice of for planting, rake the surface of the bed smooth and even, still preserving its convexity, and mark the exact situation for every root upon it. The proper distance between each root, is seven inches from centre to centre; and if the rows are seven inches asunder, the roots will form squares, of similar diameter, on all parts of the bed.

A bed consisting of seven rows, makes the noblest appearance, when it is of sufficient length, with a path round it about two and a half or three feet wide; but where the number of roots is small, five rows may suffice, and the path, in that case, may either extend quite round the bed, or only on one side, at pleasure.

If, therefore, the bed consists of seven rows, it should consequently be fifty inches wide, which will allow a space of four inches between the outside rows and the sides of the bed; but if the bed contains only five rows, it will only require to be three feet wide, to give the roots similar distances. Having sprinkled a little clean sand where the roots are to be set, place them with great exactness, and add some very sandy earth, so as to completely envelope each root in a little cone of it; then cover the whole very carefully, with strong, sound, fresh loam, about four inches thick at the middle of the bed, gradually decreasing as it approaches the sides, where it should be about three inches thick; thus will the convexity of the surface be increased in a proper degree, and the roots will be covered with soil, to a depth proportionate to their size and strength; the largest and strongest having been placed in the centre rows, and the smaller and weaker on those of the outside. No tulip root, whatever may be its size or strength, should be planted more than four inches deep from the upper side of the root; nor should any blooming root be planted less than two and a half or three inches deep, however small it may be. The soil made use of for covering the bulbs, should be frequently turned over and thoroughly exposed to the sun and air some time before it is made use of, that it may be rendered perfectly sweet and free from the acrid quality that most are subject to, and which is taken from the soil by the action of the sun and air.

a path in the front and none behind, then it will be proper to plant the smallest and lowest growing roots in the front, next the path, and so gradually to increase in the size of the roots to the fifth or last row, which should contain the strongest and largest of all; when the roots are properly covered with soil, as before directed, the surface of the bed will slope one way, forming an inclined plane: it will be necessary to support its highest side at least, with boards, or brick work, otherwise the earth would be liable to crumble down, and leave the roots bare, or too shallow.

When the operation of planting is concluded, the bed may be hooked over, and taken care of, in the manner directed for hyacinths, i. e. so as to preserve it from very heavy rains, and severe frosts; but either one or the other, in moderation, will be of more service than injury to it.*

(To be continued.)

SPORTING OLIO.

THE JONES ARABIAN.

Sassafras Neck, Cecil co., Dec. 12, 1826.

TO THE EDITOR OF THE FARMER,

Sir,—Having seen in your last number a woodcut of the celebrated Arabian horse of Lord Godolphin, I am induced to call the attention of judges, to an Arabian horse purchased by the American Consul at Tunis, and imported into this country by Commodore Jones, in the U. States frigate Constitution, some years ago. From the great similarity, in form, between these animals, I cannot resist the conclusion, that Dolphin, the Jones Arabian, must be of the same kind of stock as Godolphin, and consequently deserving of examination.

The observer, upon comparing the portrait of the Godolphin with the Jones Arabian, will be struck with the great resemblance that exists in the form of the withers and rise of the chest, so remarkable in the Godolphin. The form of the head is precisely similar; they are alike in the back, that of the Jones Arabian being a little shorter, the similarity is also to be seen in the hind parts, the Jones Arabian being somewhat more droop-arsed, the only objection that has ever been made to his form.

As regards size, the Jones Arabian is just the same height as the Godolphin. It is stated the Godolphin bore evident marks of being a wild horse of the desert. The very same impression is made by the Jones Arabian, upon the mind of the spectator.

In this respect, he differs very much from Bussorah, the beautiful sorrel Arabian. Bussorah has more the appearance of the English race horse—

* Tulips, however, covered early in the season, generally receive more injury than benefit, as the close covering of mats or canvas will naturally draw the foliage weak and long, in consequence of which they are less able to bear long covering during the season of their blooming. They are perfectly hardy, generally bearing the most intense frosts without injury; neither does abundant rain, up to the time the blossoms remain unopened, injure them in the least; the greatest danger is, after the foliage is expanded, and the stems make their appearance; then a violent storm of hail would, if unprotected, destroy the beauty of the foliage, and in a great measure injure the stems so as to cause the bloom to fail in many instances; to avoid this, we have never found a better remedy than a close meshed net, the meshes not more than half an inch square, placed over the hoops, and brought down to the ground on each side; this will also serve for other purposes, such as keeping off cats, &c. which are very fond of scratching in such situations. The net may remain on the hoops until removed to make way for the cloth awning; it will admit as much light as will be necessary for the health and strength of the plants; at the same time, no danger need be apprehended from the most violent hail storms, as the hailstones will strike the net and fall through without injury.

Dolphin will strike you at once with being different from any horse you ever saw, at least, such was the impression made upon the writer.

He is a dapple grey, with a very long black mane, his tail and legs are also black. In point of spirit and action, he admits of no superior. He is at present in Cecil county, Maryland, and stood to mares during the springs of 1825 and 1826. His oldest colts are not more than nine months old, and are thought very promising. It is, however, unfortunate, that in his neighbourhood, there are very few, if any, full blooded brood mares; from this circumstance, and the remoteness of the situation, his merits as a Turf Stallion cannot be fully ascertained.

With regard to his own performances, it is within the recollection of some of our naval officers attached to the Constitution, when under the command of Commodore Jones, that he was taken from on board, and with scarcely any training, ran a trial race at Gibraltar, with one of the Earl of Chatham's blood horses in a style highly creditable.

The writer wishes it to be understood, he has no pecuniary interest of any kind whatsoever to subservise, in noticing this animal in your journal. He is free to confess himself, an enthusiastic admirer of the blood horse; believing him, notwithstanding the objection of want of size, to be the best for any purpose serviceable to man. His sole motive in making this communication is, that it may lead to an examination by better judges than himself, in the hope, if found worthy, a few fine mares be bred to this horse by way of experiment, in improving the American stock.

SHREWSBURY.

STAG HUNT.

A fine deer was turned out, on Easter Monday, on Farnham-common, for a day's diversion by the king's stag-hounds. A numerous circle of sportsmen, of all ranks, were assembled on the common, as well as a great number on foot, to partake of the sport. The deer, on starting, proceeded to the direction of Dropmore-hill, through the woods leading to it, where he was headed by the sportsmen on foot, the deer then made a double round towards Clifton, and ran down the hill towards the Thames. The sportsman, who imagined that he would cross the water, proceeded, together with the hounds, over Maidenhead bridge, and took to the right; but the deer was running along the bottom of the wood, under Clifton hill, by the spring, when one of the yeomen pricklers, who was following the deer, gave a signal for the huntsman and hounds to return over the bridge, which they did, and turning to the left, renewed the chase. The deer, proceeding up the hill towards Lord Barton's seat, at Hedsor, and, taking to the left, by Wooburn, up the hill, and through Beaconsfield, then to the right, and back again, through the woods and enclosures, down to Farnham, crossed the Bath road towards the Thames, which he crossed opposite Braywick; the deer took across the fields, towards White Waltham, then to the left, towards Binfield, and through the enclosures, near Lord Brook's park, where the fine deer was at last taken, after an excellent chase of above five hours, during which time it is supposed to have run above sixty miles.

[Annals Sport.

RECIPES.

TO PICKLE BEEF, PORK, &c., AND TO KEEP MEAT GOOD IN THE HOTTEST CLIMATES.

To four gallons of water, add one pound and a half of Muscovado sugar, two ounces of saltpetre, and six pounds of bay or common salt. Put the whole into a clean pot, or kettle, and let it boil, being careful to take off all the scum as it rises. When there is no scum, take the liquor off, and let it stand till cold; having put the meat you wish to preserve

into the vessel you intend to keep it in, pour in the liquor till the meat is quite covered, in which condition it must be kept.

If you intend to preserve your meat a considerable time, it will be necessary, once in two months, to boil the pickle over, again clearing off the scum that rises, and putting in, when boiling, two ounces of sugar, and a half pound of common salt. Thus the pickle will hold good for twelve months. It is incomparable for curing hams, neat's tongues, or beef which you intend to dry; observing, when you take them out of the pickle, first to clean and dry them, put them in paper bags, and hang them in a dry, warm place.

A CURE FOR COCKROACHES.

A respectable professional gentleman informed us yesterday, that he has recently discovered that the spirits of turpentine is an effectual remedy against the depredations of Cockroaches. He recommended to put a little of it upon the shelves or sides of your book-cases, bureaux, armoirs, or other furniture, in which they take shelter, which may be readily done with a feather, and these troublesome insects will soon quit, not only the furniture, but the room. The remedy is simple and easily obtained by every person who wishes it. It is not unpleasant to the smell—soon evaporates, and does no injury to furniture or cloathing. This is a valuable discovery, if it proves, in all cases, as effectual as our informant assured us it did in his house.

[Louisiana Advertiser.

MISCELLANEOUS.

TRADE OF THE SUSQUEHANNA.

MR. SKINNER,

A keeper of a toll-gate, who resides immediately upon the margin of the Susquehanna river, about a mile above Columbia, kept an account of the several descending arks, boats and rafts, that passed his residence between the 3d of March and the 3d of July last—the aggregate of which was estimated as follows, viz:

1037 arks, average value \$1000 . . .	\$1,037,000
164 keel boats, do. 1000 . . .	164,000
1090 rafts of lumber, do. 300 . . .	327,000

Total estimated value, . . . \$1,528,000

To be satisfied that this estimate is not exaggerated, and of its being, in great probability, below the real value of the produce seeking a market, it is only necessary to advert to the fact, that the produce which is entrusted to arks and boats consists, in a great degree, of wheat, flour, whiskey, iron and coal—that an ark full freighted is capable of carrying—

In wheat, from 1600 to 2000 bushels—value, \$1600	
In flour, 400 to 450 barrels do. 2000	
In whiskey, 100 to 120 hds. do. 8000	
In iron, 50 to 60 tons do. 4000	
In coal, 50 to 60 tons do. 360	

The above may be considered as the amount that an ark is capable of carrying with safety, when the waters are in good arking condition; of course many cargoes are of less value. A keel boat usually carries from 1000 to 1500 bushels. From these facts you will perceive that the estimate is probably greatly below the real value. This produce, with the exception of a portion of coal and lumber which is purchased at Columbia for the supply of the back country in Lancaster and Chester counties, descends to tide—a great portion of which is ultimately deposited on our wharves, having received an accession at Columbia from the surrounding country, it is believed, to a much greater amount than that which has been purchased and detained there. The verity of the conjecture that the pro-

perly descends the river, is supported by the fact that upwards of 800 arks have passed through the Maryland canal during the present year; and it is a fact notorious to those acquainted with the trade of the Susquehanna, that a very considerable number of ark seek the tide over the bed of the river, without recurring to the canal, when the waters are at a sufficient elevation to enable them to do so.

Yours, A. B.
December 12, 1826.

CAPTAIN PARRY'S NEW EXPEDITION.

A new expedition is projecting for Capt. Parry. It has for its object to reach the Northern Pole, to make known to us what the inmost point of the ice-bound Arctic Circle is. Capt. Franklin had offered himself to undertake a journey over the ice from Spitzbergen to the Pole, and this has been adopted by Capt. Parry, who, in addition to his own ardent expectations of success, procured the sanction of the Royal Society to the practicability of the enterprise. The Hecla is to be prepared for Capt. Parry early in the ensuing spring, and in that vessel he is to proceed to "Cloven Cliff," in Spitzbergen, in lat. 79 deg. 52 min., (or about 600 miles from the Pole,) which he is expected to reach towards the end of May. From this point he will depart with two vessels which are capable of being used either as boats or sledges, as water or ice is found to prevail. They are to be built of light, tough, and inflexible materials, with coverings of leather and oil cloth; the latter convertible into sails. Two officers and ten men are to be appointed to each with provisions for 92 days, which, if they only travelled on the average thirteen miles per day, and met with no insurmountable obstacles, would be sufficient for their reaching the long desirable Pole, and returning to the Hecla, at Cloven Cliff. Dogs or reindeer the former preferable for drawing the sledges, when necessary, but the latter better for food in case of detention) are to be taken on the expedition. It is known that the summer temperature is far from being severe; there is perpetual light, with the sun continually above the horizon, and Parry knows from experience that the men on such occasions are always healthy. During his absence, the boats of the ship are to be engaged in exploring the eastern side of Spitzbergen; and the officers and men of science in making philosophical experiments with the pendulum on magnetism and meteorology, in natural history, &c. The reward of success, besides the personal glory and general advantage attending the exploit, will be 5,000*l*; and we sincerely hope, that by this day twelvemonth, Capt. Parry and his gallant companions may be safe in London to claim and receive it.

THE FARMER.

BALTIMORE, FRIDAY DECEMBER 22 1826.

ILLINOIS LEAD MINES.

Accounts from the Lead Mines, near Fever river, represent the prospect of the miners as peculiarly encouraging. Between four and five hundred men are at work raising the mineral, which is found in greater quantities than can be smelted by five furnaces, kept in constant operation. It is but a few years since the mines were worked by Americans, and they already yield a considerable revenue to the government.

DEER.—These nimble-footed animals are again plentiful in Plymouth woods, they are often seen and occasionally killed by the hunter. It is now against the law of the state to hunt them with dogs.

[Boston paper.]

PRICES OF STOCKS.

(Reported for the American Farmer, by MERRYMAN & GITTINGS, Stock and Exchange Brokers.)

Baltimore, Dec. 22, 1826.

BANK STOCKS.	par value.	present price.
U. States' Bank Stock, per share,	\$100	\$120 1/4
Bank of Maryland, do.	300	227 w
Bank of Baltimore, do. (div. off),	300	340
Union Bank Maryland, do.	75	75 w
Mechanics' Bank,	9	9 w
Franklin Bank,	20	25.25
Commercial and Farmers' Bank,	20	26
Farmers' and Merchants' Bank,	50	54.25
City Bank, w	15	2.80
Marine Bank,	25	27 25
Farmers' Bank of Maryland, w	50	52.25

CITY STOCKS.

Corporation 6 per cent. redeemable after 1836,	100	111
Do. 5 per cent. redeemable in 1832,	100	102 w
Penitentiary 5 pr. cent. stock; (none in market,) }	100	
Museum, 8 per cent. (no demand.)		
Masonic Hall, 6 per cent.	100	par & int.
Annuities, or Ground Rents,	6 to 10	per cent.

ROAD STOCKS.

Reister's Town,	20	10.25
York,	20	7.50
Frederick,	20	12
Washington and Baltimore,	50	31.50
Baltimore Water Company Stock, } per share, (div. off), }	50	93
Union Manuf. Co. Stock, per share,	50	14 w
Gas Stock	100	106
Temasaltepeque Mining Co's, per share,	600	850
Havre de Grace Turnpike 6 per cts. par & interest		

U. STATES' STOCK.

Six per cent. 1813,	100	102 w
—, 1814,	100	103 1/2
—, 1815,	100	105 w
Three per cent.	100	81
Four and half per cent.	100	103
Five per cent.	100	108

W., wanted—by Merryman & Gittings.

A GREAT BARGAIN.

The subscriber offers for sale, or exchange for property in this city, a FARM in the county of Oneida, village of Taberg, seven miles north of the Canal, containing 535 acres, about 200 improved, well fenced and watered, with a Grist Mill, Saw Mill, Distillery, 3 large Barns, connected by Sheds, one large Mansion House, and four tenants' Houses. The establishment is in perfect order buildings and fences new. As it is the wish of the subscriber to withdraw his capital from the country, it will be sold at about half its value, and upon a long credit, for most of the purchase money.

Also—A FARM in Lee, Oneida county, 5 miles north of the Canal, containing 225 acres, 50 acres improved, a new Frame House, Barn, and 300 bearing Apple Trees.

Also—1000 acre in Oswego county, well watered 23 Township Serba's Patent Salmon Creek runs through it, and 1000 acres near the village of Taberg the greatest part of both tracts under contracts, payable in 2 to 6 years, and improved by actual settlers. Any person wishing to purchase property of this description, will find a great bargain. The title is clear of all incumbrances. Apply to JOS. E. BLOOMFIELD, New York, Nov. 31. No. 118 Water st. T. C. H.

CONTENTS OF THIS NUMBER.

Litchfield (Conn.) Agricultural Society's Show—Mr. Smith's Cotton Planter—Culture of Hops—Observations on the Culture of Silk, concluded—Prince's Fruit Trees—The Native Grape—On the cultivation of Tulips—The Jones Arabian—Stag Hunt—Recipes, To pickle Beef, Pork, &c.—A cure for Cockroaches—Trade of the Susquehanna—Captain Parry's new Expedition—Illinois Lead Mines—Deer in Massachusetts—Advertisement.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, #	lb.	6	10	9	12
BEES-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16 1/2	20	22
Havana,	—	14	17		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland,	—	10	12		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent each number to No. 18.	—				
CANDLES, Mould,	—	13	14	16	18
Dipt,	—	11	12		14
CHEESE,	—	8 1/2	12	12	15
FEATHERS, Live,	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 3/4			
Shad, trimmed	—	5 50	6 00		
FLAXSEED,	bush	1 00	1 10		
FLOUR, Superfine, city,	bbl.	4 87 1/2	5 00		
Fine,	—	4 75			
Susquehanna, superfi.	—				none
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	50	51		
white	—	50			
Wheat, Family Flour,	—	1 05	1 12 1/2		
do. Lawler, & Red, new	—	90	95		
do. Red, Susque.	—	95	1 00		
Rye,	—	75			
Barley, Eastern	—	1 22	1 25		
Do. country	—	90	1 00		
Clover Seed, Red	bush	4 50	5 00	5 50	
Ruta Baga Seed,	lb.	87		1 00	
Orchard Grass Seed,	bush	3 50			none
Mange Wurtzel Seed,	—	1 25		1 50	
Timothy Seed	—	4 00		5 00	
Oats,	—	40		50	
Beans, White,	—	1 25	1 50	2 00	
HEMP, Russia, clean,	ton	205	250		
Do. Country	—	120	230		
HOPS, 1st sort, (1826)	lb.	20			
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	6 1/2			
Bar	—	7 1/2			
LEATHER, Soal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.		50	62 1/2	75
Havana, 1st qual.	—	30	32	37 1/2	
NAILS, 6x20d.	lb.	6 1/2		9	
NAVAL STORES, Tar,	bbl.	1 50	1 62 1/2		
Pitch,	—	1 75			
Turpentine, Soft,	—	1 75			
OIL, Whale common,	gal.	30	34	40	
Sperm, etc, winter	—	80	85	88	
PORK, Baltimore Mess,	bbl.	11 00	11 50		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	3 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	32		5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5 1/2	8	10	12
WHISKEY, 1st proof,	gal.	37	39		50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	30		50	
SUGARS, Havana White,	c. lb.	12 50	13	14	15
do. Brown,	—	10 50	10 75		
Louisiana,	—	8 75	9 00	10	11
Loaf,	lb.	18	22	20	22
SPICES, Cloves,	—	70		1 00	
Ginger, Ground,	—	7	12	12	13
Pepper,	—	15	16	25	
SALT, St. Uhes,	bush	43		75	
Liverpool ground	—	48		75	
SHOT, Balt. all sizes,	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Port, first quality,	gal.	1 65	1 85	2 50	
WOOL, Merino, full b'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country,	—	18	22		
Skinners' or Pulled,	—	20	25		

Printed every Friday, at \$5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOY, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

SKETCHES ON AGRICULTURE.

By A. W. Foster, Esq., of Greensburgh, Pa., President of the Westmoreland Agricultural Society.

It appears to be the fate of all newly settled countries, to have the soil nearly exhausted before any considerable improvements in agriculture are commenced. Such was the case in the eastern parts of this state, unless in a few places where the soil was alluvial, or from its natural and almost inexhaustible fertility, it could scarcely, under any bad system of farming, be materially deteriorated.

The observation of Mr. Kalin,* a Swedish traveller, in the account he gives of the husbandry of the then British colonies, as he found it in 1749, is a correct picture of all the new settlements subsequently established.

"They make scarcely any manure for their corn fields," he says; "but when one piece of ground has been exhausted by continual cropping, they clear and cultivate another piece of fresh land, and when that is exhausted, proceed to a third." It is not necessary, however, to go so far back into antiquity, as those who were acquainted with that section of the state, thirty-five years ago, and have seen it of late years, will have perceived how much has been added, by the improvements in agriculture, to the annual productive value of the freehold.

In a country like ours, where land is plenty in proportion to the number of inhabitants, and where individuals are proprietors of large farms, the disposition appears too prevalent to be more anxious as to the quantity cultivated, than the manner in which it shall be done. The temptation is strong, but it is a great and radical error. The labour is greatly increased, in procuring the same quantity of grain from twenty that might be procured from ten acres; and this difference exists between what will be estimated a tolerably good crop, and one of the first quality. Between these two points exist the profits of a crop, and they will be increased or diminished as they approximate to either.

In every good system of agriculture the quality of the soil, the order in which it shall be at the time of sowing or planting, and the season for performing either operation, will be considered as articles of primary importance.

In clayey soils, particularly those impregnated with a calcareous substance, an advantage will be found from putting on the manure from the barn yard at an earlier stage of decomposition than on those of a light or sandy nature, where it will not so rapidly decompose; and in such soils, a greater benefit will be found from ploughing down clover, buckwheat, millet, or other vegetable substances, than in a light and sandy soil.

Experience has fully proved, that the more perfectly the soil is pulverized, the more capable it is of conveying nourishment to the tender fibre of the plant. This is an important desideratum in agriculture. A judicious farmer will always have an eye to this, particularly in breaking up his fallows, (when this system is pursued;) as, if this operation be performed in a clayey soil, when the ground is wet, a winter's frost will be necessary to separate the particles of earth which have been formed into solid masses or clods. There is another fact deducible from certain philosophical principles, that the more perfect the state of pulverization of the earth on the surface, the greater will be the quantity of moisture retained in it in dry seasons, which also, in addition to other reasons, furnishes a strong argument in favour of deep ploughing.

The system of fallowing ground, however, is a most ruinous one; and its necessity arises from a

previous defect in the cultivation of the ground. If a field has been some years in blue grass, it will be in vain to think of ploughing it shortly before sowing wheat, and have it in any proper degree pulverized, or to expect, by a single ploughing, to destroy the blue grass, which (being an indigenous plant,) would most assuredly come forth the next spring, and destroy all prospects of a wheat crop. It, therefore, in such cases, becomes necessary for the farmer to destroy its ascendancy, by breaking up his fallows early in the spring or summer, expose his soil to the exhausting rays of the sun, give his ground a second ploughing before harvest, and, after harvest, by a third ploughing, commit his grain to the earth—all which are necessary to destroy this grass (which is universal in Pennsylvania,) and pulverize the earth. Whereas, by putting his ground in clover, he may have tenfold the pasture during the time the land is not cultivated in grain, and by once ploughing in the fall of the year, and harrowing in his grain, have his ground as perfectly pulverized as in the other mode; free from all the exhausting effects of exposure to a summer's sun; enjoying the additional quantity of pasture, and improving his soil by ploughing in his clover, and the decomposition of the roots of the plant. It is not saying too much to aver, that not a single field of blue grass should be permitted in the state. Not a field should be seen that was not either in grain or clover, or some kind of grass superior to the common natural grass of the country; unless where a corn crop had been raised the preceding year, and when the proprietor is desirous of putting it in fall grain without further exhausting the soil by a summer crop. The sowing of buckwheat and ploughing it down, which may be done twice in the same year, would add little to the expense, and greatly to the fertility of the soil. The first crop being ploughed down immediately before harvest, would, on ploughing down the second crop in September, be decomposed, and afford immediate nourishment to the wheat crop. The second crop would have undergone a complete fermentation early in the ensuing spring, when the beneficial effects of both would be visible.

In the present state of agriculture, when so many fields are suffered to grow up with blue grass, and where the system of fallowing so extensively prevails, even after stirring this ground, which might be done early in June, if sowed with millet, would (if the ground be of such a quality as to produce good oats,) produce an excellent crop, which might be cut about the first of September, producing an abundant crop of seed, and excellent fodder, or even if cut earlier, and cured with the seed, before the same be perfectly ripe, would afford food for cattle equally nutritive with the best timothy and clover hay; or if ploughed down in all its luxuriance, what a mass of manure would be afforded! An unjust prejudice has for some time existed against raising millet. It is true it may not have answered the expectations formed respecting it; nevertheless, it is confidently believed that it could be beneficially used in a judicious course of agriculture, in either of the modes before suggested; and if cured for food, would add greatly to the resources of the barn yard—an object of primary importance.

In England, where the whole kingdom almost is in a state of garden culture, not a weed is suffered to go to loss; all is added to the barn yard for manure. The very soot of their chimneys is preserved and used as a manure.

The importance of a rotation of crops to a successful course of agriculture, falls within the observation of every one. Some of the substances essential in the formation of grain, become exhausted by a continued routine of cultivation. The same kind of grain should never be sown in succession on the same ground; nor should more than two crops of any kind of grain follow in immediate suc-

cession, the intervention of grass crops being essential to restore to the soil those substances necessary to produce a perfect grain crop, unless the supply be formed by the annual addition of stable manure.

No precise, uniform rule, for a rotation of crops, can be prescribed, as something will depend on the nature of the soil, and much upon the particular state in which the ground may be at the time of commencing such a system. A few observations will, however, be made, as to the proper course to pursue under particular circumstances. An upland meadow, where the advantage of irrigation does not exist, will, unless where the soil is naturally moist and remarkably fertile, in the course of a few years, become grass-bound on the surface, and produce little or no timothy or clover, the indigenous grass of the country taking its place. It is true the timothy and clover may be longer preserved by the most expensive of all possible modes of manuring, spreading it over the surface, (where it is subject to be carried off by rains, or exhausted by the rays of the sun,) or by the use of gypsum, which is also too expensive for general use in this country at present. If such a piece of ground be ploughed deep, in the month of March, and well harrowed about planting time, and lightly marked out for planting corn, so as not to disturb the sod, each grain of corn will have a batch of manure beneath it; and in the month of June, the middle may be ploughed, when the sod will be decomposed and thrown up to afford an additional quantity of manure to the new roots, which will be shooting out from the stalk; there will be no trouble from weeds, which will always be the case in mellow ground, several years, in the cultivation of corn, &c. and the crop, in most cases, will be abundant. The ensuing spring sow the ground with barley or oats; or by cutting the roots, a little after the usual time of topping, as now generally practised; which is an admirable plan for procuring a large additional quantity of excellent fodder, and of adding greatly to the stock of the barn yard, (the very best substance for manure.) The ground may, if not too wet a soil, be sowed in wheat, rye, or fall barley; and in either case be sowed with timothy and clover, which is preferable to timothy or clover alone, producing a better hay and a larger quantity, and no difficulty will be experienced in consequence of the different periods at which these grasses ripen. The clover stalks will be smaller and more tender than when raised alone, and will be supported by the timothy from falling down or lodging, in which case the leaves rot as well as the stalk. The clover is also prevented from ripening so soon, and it will be an advantage to the timothy, as respects its quality, to be cut so many weeks sooner than is now generally practised. Let this course be fairly tried by any judicious farmer, and it will never be discontinued. Such grass, well cured, will alone, be equal to timothy hay, as now cured, with the addition of eight quarts of oats per day to each horse. On this subject I speak from experience, and with the fullest confidence.

When, by the previous course of farming, any piece of ground is become free from grass, it ought, if of a good quality, to be immediately sowed in some kind of grain, according to the season. If not of such a quality as will produce a good crop, it should be sowed with some kind of seed, with the view of ploughing down a green crop, or be otherwise manured, or the labour employed will be lost.

As most of the lands in cultivation in this country are pasture fields, the system heretofore pursued ought to be changed as soon as possible. Let the field having the best sward of grass be ploughed up for corn, as directed in respect to worn out meadow ground. Let another field be ploughed early, and sowed with some kind of grain to be ploughed down green, as before mentioned, preparatory to

* Vide 1st vol. Smith's Wealth of Nations, p. 291.

ing them than by setting hands to search for them at day break, when they will be found on the surface, but disappear before sunrise.

The tobacco worm makes its appearance about the first of July, and will be very destructive if suffered to continue its depredations. A turkey hen, with a few chickens, will do more to rid you of this trouble than half a dozen negroes. The tobacco must be carefully suckered. A small boy will do this best. His fingers can reach furthest down between the leaf and the stalk, and prevent a new one starting from the same place. When the buds come out, or as it is called, when the tobacco is in button, it must be topped. If done immediately after the buttons appear, the tobacco will be the larger and thicker in the leaf, but not of so fine a quality.

The time of cutting is indicated by the leaf becoming puckered, something resembling the raised part of a domestic bed-quilt, by the insertion of cotton in imitation of the white Marseilles; by this raised part turning yellow, like the hickory leaf, and a glutinous substance covering the leaf, which will almost stick to your hand.

There is a point of time most proper to cut each particular plant. I prefer leaving it to pass beyond that point to falling short of it. There is less risk in its curing well. One essential point to be observed, which has been already hinted at, is not to cut the tobacco for two or three days after rain. The rain washes off the glutinous substance mentioned, and the tobacco, if cut without this substance, will be greatly deficient in weight and quality.

Tobacco consists of several substances; some volatile, others fixed. The former are the water, the green, colouring matter, and the essential oil, in which the aromatic quality exists, as also the narcotic quality. The object and process of curing tobacco is to get rid of the water and green colouring matter, without destroying the other less volatile parts. The tobacco when cut, which may be from 4 to 6 o'clock in the afternoon, as the day may be cool or hot, should be put gently in small heaps, or singly, the top from the sun, until the leaves and the stems completely relax, which will be in half an hour to an hour, according to the state of the weather; then taken to the tobacco house, and there piled up in one heap, having as little surface exposed as possible; and if convenient, an old blanket, &c. may be thrown over the whole. Early next morning, say 6 to 8 o'clock, it will be found to be heated, and to have undergone a sweat. It should then be immediately hung up on poles, either by splitting the stalks, if large, or by driving small pegs of wood into the butt end of the stalk. The tobacco, when hung up in rows, must touch each other, and in a few days, as it relaxes more, the poles must be closed up, so as to keep the rows in contact. This must be repeated every few days for two or three weeks. Should a long period of wet weather come on, it may be necessary to separate them, to prevent the tobacco from moulding.

The rationale of the process is this. By heating the tobacco the first night it is put in heap, a fermentation or partial decomposition, takes place, and the pores become opened sufficiently to permit the watery part to escape. In the escape of the watery part, which is the most volatile, if a single stalk be hung up by itself, and exposed to a current of air, this will be so rapidly effected that but a small part of the colouring matter will have escaped, and the pores being closed after the escape of the water, the tobacco will forever remain in an uncured state; hence the necessity of keeping the tobacco closely in contact, to prevent the sudden escape of the water, to preserve the pores open until the green colouring matter can all escape. It is even beneficial, in case of dry weather, that it should be cured on an earthen floor, or that a bucket of water should be occasionally thrown under

the tobacco. If the tobacco is suffered to remain in heap until 10 or 11 o'clock in the day after placed first in the house, a decomposition would take place, and the aromatic quality would all escape, and the tobacco, when dry, would resemble the colour of bohea or black tea, and be perfectly useless. As the green colouring matter gradually escapes, the tobacco assumes the bright yellow colour of the hickory leaf when about to fall from the tree; a new combination, however, soon takes place, by the union of the oxygen of the atmosphere and the tannin principle in the tobacco, and it assumes a brown or reddish colour. Therefore, the sooner after the complete yellow colour is produced the poles are opened, the tobacco exposed, and immediately dried, and put away in bulk, as it is called, the better.

The putting it away in bulk, is no more than stripping the leaves from the stalk, tying them up in hands at the stem, and the hand being about 1½ inches in diameter, and tied round neatly by an indifferent leaf. Careful persons make three parcels, one from the leaves near the top, one from the middle leaves, which are the best, and the other from the butt end of the stalk.

When made into hands, it may be packed in large boxes, or at the side of the wall, making the tops overlap each other, so as to preserve regularity in the pile. A moderate weight should then be placed on it to keep it compact. It will then, in the course of the winter and ensuing spring, undergo a partial fermentation, and, by the time the leaves are coming out, be found to be moist, or in a sweat, as it is termed, and have a sensible degree of heat above the state of the surrounding atmosphere. It must then be unpacked, exposed to the air until it becomes completely dry, and as soon as it becomes sufficiently relaxed for the purpose, which it will do in a day or two of wet weather, be repacked and put in press, and remain there until the ensuing fall, when it is considered fit for market.

[Farmers' & Mechanics' Mag. Almanack.

SEED CORN.

TO THE EDITOR OF THE AMERICAN FARMER:

DEAR SIR.—I fear that my little contribution of corn, which you will receive with this, if it should be esteemed worthy of being included in the parcel intended for our dear General, will not reach you in time, there is nothing very remarkable about it, in colour or dimensions, and if therefore the collection is intended for the museum of American productions, which I understand has been instituted at La Grange, it would not be worth forwarding, but, if the object should be to furnish a desirable sort for cultivation, I can safely recommend it as the best I have ever seen. For the last eight or ten years, I have been very curious and attentive in selecting from the various regions and climates of our country, the almost endless varieties of this grain, which they afford. In the autumn of 1818, I commenced in Jersey, and collected specimens, from thence throughout the Northern and Eastern States, and from both the provinces of Canada; amounting to not less than forty or fifty sorts, differing, at least in appearance, from each other. I found none of them, however, valuable to us; like most other things, they had found their proper level, and settled in their proper places. What I now send you is what I got as the genuine Tuscarora, and has been, I am satisfied, improved in my possession, by never planting a grain that was not selected in the field, (for four or five years past) from those stalks, which produced two or more ears. I am this year carrying the selection still further, the number of ears containing 18 rows, and averaging 900 grains, was so considerable, that I have collected a sufficiency to plant half floor of locust logs, as close together as they would of my next year's crop from them, and as I purpose placing the field at a sufficient distance to prevent

any admixture of the farina of any other sort, I shall be able to judge more correctly upon the now disputed point of the advantage of selecting seed—of which, by the bye, I now entertain no manner of doubt.

I have sent you also, a very remarkable plant of wheat, of the blue stem or purple straw, species.—It is as you will see, the product of a single grain, and has 170 grain stalks, which if they had been allowed to mature, would have produced an average of 30 grains to the ear, or upwards of 5000 grains for 1.—This extraordinary product, I am induced to attribute entirely to the quality of the soil, as there were at least a dozen plants growing together, all averaging upwards of 100 stalks that were of chance or spontaneous growth.

The soil is a compact, greasy, bituminous clay, which when moist is of a deep black colour, it pervades a neck of about 200 acres, in a stratum of from 2 to 3 feet in thickness, and generally lies at the depth of 3 or 4 feet from the surface, which is a cold, tenacious white clay, it is isolated, and as far as I can ascertain, not found any where else in the vicinity—I send you a specimen of it, and would be glad if some of your chemical friends would analyze it, and ascertain its properties.—We had long thought it very probable that it possessed some fertilizing virtues, but chance and not enterprise, at length developed them in the following way. In cutting a ditch bordering on a field of wheat, I penetrated in several places, as low as this stratum, and threw a portion of it in heaps for the purpose of making some experiments with it. It was neglected, however, and when the field was seeded in wheat, a few scattering grains happening to fall upon those heaps, they all grew in this extraordinary manner. During the early part of last June, we were visited with myriads of black caterpillars, which did great injury to our wheat, by devouring the blades, the entire heads of the young underling growth, and the top of the cell or chamber containing the grain, as you will perceive by examining the plants sent you, I was obliged, therefore, to pull up some of them, in order at least, to preserve a sample of the number of shoots.

Yours, very truly,

JNO. MERCER,

Cedar Park, 20th December, 1826.

RURAL ECONOMY.

ICE HOUSES.

JOHN S. SKINNE, Esq.

Sir,—Some enquiries have been made of you, I observe lately, about the proper mode of constructing ice houses, which have given rise to several communications from your correspondents on the subject.—As I always feel disposed to add my mite of experience to the columns of your useful Journal, I will give you in as few words as possible, the construction, dimensions and cost of an ice house which I have on my lot, the chief recommendation of which is its cheapness, and the little mechanical skill necessary for its construction, as mine was built entirely by the common labourers on my farm.

I dug a circular pit seventeen feet deep, the diameter of which is eighteen feet at the surface, and twelve at the bottom. The bottom, which was a fine yellow sand, I made to incline from the sides to the centre, and immediately in the centre, which was the lowest point, I dug a well three feet square and four feet deep, in order that the water might drain off immediately from the ice, when any thawing took place.—On the bottom of the pit over the well, I placed four large locust sills, and on them put a floor of locust logs, as close together as they would lie.—I then put down logs endwise, sixteen feet six inches in length, with the small ends downwards,

until the whole pit was lined round with logs; at the bottom of the logs where they came in contact with the floor, and at the top I put a strong hoop, (made by splitting long white oak saplings,) nailed to every log, and two similar hoops in the intermediate space, in order to keep the logs securely in their places—on the surface over this, I erected a light roof of boards, and lined it on the inside with corn stalks, which are excellent non-conductors, and in that sheltered situation will last many years. I consider the plan of putting the logs down endwise as much the best, because when they begin to decay, it is but little trouble to draw one out at a time and replace it with a sound one, whereas, in the other plan of building log pens, if one log should decay near the bottom, the trouble of repairing is almost equal to building a new one. In filling my ice house, I place a thin cover of green cedar brush at the bottom, on which the ice is thrown, and take care when getting the ice, to have every large piece struck with the eye of an axe, so as to reduce it to pieces of about a pound in weight.—I place a small quantity of straw between the ice and the wall of the house, and when full cover the whole with dry, clean oak leaves, which I have found to preserve the ice much better than straw. During the summer I have dry straw stuffed in between the walls and the ice, as the latter recedes by melting from the walls, which is easily done with a long pole.—This ice house, which you will perceive is an inverted frustrum of a cone, contains when full, about 1800 bushels of ice, and although three (private) families are supplied from it constantly, it has never given out—

Cost of building.

Digging the pit,	\$9 00
Cutting logs, &c.	1 34
Getting boards, &c.	1 75
Hauling all the timber, a few hundred yards,	1 50
Putting down floor and side logs,	2 00
Putting up roof,	3 00
Nails and door hinges,	1 00
Making and putting up door,	75

Whole expense, \$20 34

In the construction of ice houses, it is a great convenience to have the door made sufficiently wide to receive with ease, the tail of the cart or waggon within it, in unloading, as it can be done in half the time. All ice houses should have a window in the upper part of the gable end, with a shutter to it, as it is absolutely necessary in very hot weather, to ventilate them. In the estimate above, I have calculated all the expense that a farmer could possibly incur in building an ice house of the kind recommended; but mine was done at a very leisure time, and therefore I did not actually incur all the expense stated.

Yours, respectfully, D.

SORE TONGUE IN HORSES.

Prevention better than cure.

Stanardville, Orange county, Va. Dec. 8, 1826.

DEAR SIR.—Looking over a paper a few days ago, I read an extract of a letter from Dr. Spence, which is published in the American Farmer, stating, that a disease prevails among the horses in Maryland, known with us by the name of the sore tongue, corresponding exactly with the description the Doctor gives of it, and requests of you any information you may be in possession of, as to managing the disease. It has for several years been prevalent in this section of country, and when it first made its appearance, excited much alarm with the farmers, but from experience in its treatment is now considered so simple a disease, that we take little or no care in keeping separate, the diseased horses, from those that are not. By making use of a little tar, once a

day, rubbed on the tongue of the sound horses with a mop, is an effectual preventive; for the diseased horse, take a common table spoonful of spirits of turpentine and pour it on the surface of the tongue, as far down as practicable, then with a mop well saturated with the spirits of turpentine, mop every part of the tongue, after this make use of the tar as in the way above mentioned as a preventive, this done once or twice a day, for two or three days, has never failed making a cure. It is not unfrequent with us, that the horned cattle have the same disease, from eating about the stable where our horses have the disease, I commonly made use of the tar as a preventive, (and in the other cases too,) after feeding my horses, as they would refuse their food if the tar was used before feeding them, and while the taste of the tar yet remained. If the above information should be new to you, you can make it known to others through the medium of your valuable paper.

A VIRGINIAN.

LADIES' DEPARTMENT.

TULIPS.

(From Maddock's Florist's Directory.)

[Continued from page 319.]

By the end of February, every plant in health will be visible above ground; some tall early sorts will be two or three inches high, others one inch, and the latter sorts just making their appearance; indeed, a very few remarkably late sorts may be a week longer before they appear, but not more; if, on examination, any distemper, or canker, is discernable on the foliage, about this time, either above, or an inch or two below the surface of the soil, it should be carefully cut out, with a sharp knife, and the wounded part left exposed to the sun and air, which will presently heal it: a fine dry day should be made choice of for this operation.

If the surface of the bed appears to be of too close and solid a texture, it should be carefully stirred up, about two inches deep, which will admit the air more freely, and prove, in all respects, very beneficial.

By the end of April, some of the plants will probably be grown so tall as to require the hoops to be raised a little, to secure the blossom from injury: attention to this part must not be omitted, for the blossom is very tender, and likely to be bruised and disfigured, by a very slight blow, or rub against the hoops. As soon as any of the earlier sorts begin to shew colour, they should be shaded from the sun, for when its heat is considerable, it will cause the colours to run, and internix in such a manner as to destroy the elegance and beauty of the flower; some sorts are more particularly liable to this effect than others, and will be spoiled in five minutes.

When the greater part of the blossoms have begun to open, a frame, or awning, should be erected over the bed and paths, nearly similar to that for hyacinths: that is to say, so as to keep out rain, and admit as much light as possible; this must be thrown off, or rolled up at every favourable opportunity, as directed for hyacinths, except that it should be done rather earlier in the morning, and later in the evening: because the sun has acquired a greater degree of power at this season of the year than earlier. If these frequent exposures to the light and air be omitted, the colours of the flowers will be faint and weak, and the grandeur of effect will be lost, or considerably lessened.

The cloth covering should come down on each side, within about three feet of the ground, to allow a free circulation of air, except in windy weather; from the effects of which the flowers must be most carefully preserved, by a continuation of the covering quite down to the ground, on the windy side; a line of mats sewed together, and their upper edge nailed to the frame on that side, may an-

swer the purpose, if the cloth is not of sufficient length.

Tulips never require to be artificially watered, in the hottest and driest seasons, at any period from planting to taking up the roots; nevertheless moderate rains may always be admitted before, and in very small quantity after the bloom is over; but early in the spring they are absolutely necessary, in order to procure a strong bloom.

When the awning is erected, the hoops should be carefully taken away, the sides and ends of the beds should be neatly boarded up, and the paths lowered two or three inches, to bring the flowers nearer to the eye: a slight frame, about two foot high, should surround the bed, to prevent the garments of spectators from rubbing against or breaking off the flowers; lines of small twine, painted green, and corresponding with the rows of flowers, should pass from one head of the bed to the other, fastened to the end pieces of the frame and stretched tight: to these the stems of the flowers are to be loosely tied with short pieces of green worsted, which will preserve a pleasing regularity of appearance, without stiffness and formality. Tulips will bear to be covered a longer time in bloom than most other flowers, without sustaining any considerable injury: it may be continued three weeks with great safety.

If any roots should perish, or fail to produce bloom, the deficiency may be made good in the following manner: it is necessary, in the first place, to be provided with two strong tin instruments, or tubes, each having two substantial perpendicular iron handles, to force the instrument into the ground, and draw it up again, with the plant and earth connected with its roots and fibres; but in order to discharge its contents into the place prepared for their reception, by the other instrument, of exactly similar dimensions, it should be held together on one side by a strong wire, which upon being drawn out, when the plant is placed in the situation it is intended for, will allow the tube to spring open a little, so as to permit it to be drawn up again, without disturbing the plant; this tube, or transplanter, should be perfectly cylindrical, open at both ends, of about twelve inches long, six in diameter, and made of the strongest and best tin plate: one of these tubes may serve to take out the defective plant, with its earth, &c. and the other to bring a well blown flower from the offset beds to substitute in its place; the instrument should be forced into the ground, as deep as its length will admit, otherwise the fibres will be broken off so near the root as to check the growth of the plant, but the operation may be performed with so much dexterity and address, as not to do the plant any material injury, or retard its growth in any considerable degree: it will be proper to give the newly introduced plant about a pint of soft water immediately, or its stem will be apt to bend a little at first. Those who do not choose to take the trouble of repairing their bed in the foregoing manner, may immerse the lower end of the stems of flowers, taken from the offset beds, in phials filled with water, and sunk into the bed, so as not to appear above ground; these will continue in bloom several days, without requiring to be changed, and will make a tolerable appearance.

About a week or ten days after full bloom, when the petals of many begin to drop off, the awning should be taken down, together with the frame, boards, &c. that surround the bed; and the mats and hoops may be replaced as before, to throw off excess of rain, as the case may require: and as the leaves or petals of any fall, the seed vessel of such should be immediately broken off, close to the stem, for if suffered to remain on the plant, it will procrastinate the period of its maturity, and weaken the root considerably.

The bed may remain in this state about a fast-

night longer, by which time the grass, or foliage, will become of a yellowish brown, and two or three inches of the top of the stem will wither, dry up, and become purplish: this denotes the critical period to take up the roots, because if done earlier, they will be weak and spongy, and if deferred later, their juices will become gross; this will be manifest at the succeeding bloom, by too great a redundancy of colorific matter in the petals, and the flowers will be what is generally termed foul.

When the roots are taken up, they are to be gradually dried, and placed in a situation where they may remain so: it will not be necessary to do anything more to them till August or September following, at which time, it is proper to take off their loose skins, fibres and such offsets as are easily separated; observing not to leave the roots too bare, because the action of the air upon such, would have a tendency to weaken and injure them, by drying up part of their juices: the last brown skin, which is so intimately connected with the root, should remain on it till the time of planting; it should then be entirely stripped off, and the root left perfectly bare and white; but it should be performed with great care, to avoid bruising or wounding the root, especially at the lower end, where the fibres are formed, which is at this time extremely tender, and will scarcely bear to be touched: a small sharp-pointed penknife is the best adapted instrument for this operation.

The smallest and weakest offsets, particularly such as are not provided with a brown skin, may be replanted as soon as they are taken up, about an inch and an half deep, in a fresh sandy loam, in a dry situation, and the bed defended from heavy rains by means of mats and hoops, as before; or, instead of replanting these offsets so early, they may be preserved from the air, by being buried in dry sand till the autumn, and are then to be planted with the larger roots, but not quite so deep.

Tulips are hardier, and, of course, less liable to receive injury from frost, than most kinds of flowers; the offsets, and more ordinary kinds, may be planted in any part of the garden, from two to four inches deep, according to the size of the roots, in a good sound soil, with a little rotten cow dung, placed from seven to twelve inches below the surface: the beds should be dug twenty inches deep, and raised six or eight inches above the walks, formed rather convex on the surface, and may be provided with hoops and mats, to be used as circumstances require.

(To be continued.)

THE MOTHER.

Ah! never may that thoughtless heartless thing,
The painted gossamer of Fashion's bow'r,
Presume to take the hymeneal ring,
Or dare usurp a Mother's tender pow'r;
Enough for her to "roll the giddy eye,"
To dance, and sparkle, in the midnight hour—
Unheard her feeble infant's pleading cry,
Unmark'd the withering of that blighted flow'r.

Canst thou to menial vice and skillless care
Leave the sweet babe, that nestling seeks thy breast,

Its home, its being?—Fragile as 'tis fair,
And in its own endearing weakness blest—
Canst thou do this, and smile? Nay, canst thou live
Beneath the sense of such deep guilt oppress?
Guilt which one sinner only can forgive,
The pander parent whom e'en friends detest.

Unhappy in thy error—know, to thee
(For thou art human,) pain, and age, advance;
That blooming cheek shall fade—those bright eyes
see

New beauties far outshine their waning glance;

Disease on those light limbs her hand shall lay,
(That stern destroyer of life's young romance,)
And Time compel thee, with the old and gray
To take thy place in Death's terrific dance.

Ah! hope not then, that kindly pious friend
Shall sooth thy suffering hour with precept mild,
That o'er thy couch in sympathy shall bend
The tender husband or the sorrowing child.
Far other guests on that dread scene encroach,
(No longer now neglected or revild,)
Regret, remorse, and ceaseless self-reproach,
There howl in fierce revenge their descant wild.

SPORTING OLIO.



THE NORFOLK RACE.

On Saturday, 23d inst., agreeably to appointment, the match race for \$2000, two mile heats, between *Eagle* and *Sally Hope*, was run over the Norfolk Course, and won by *Eagle*, beating his competitor for the golden prize, two successive heats. The race afforded the highest gratification to the lovers of the sport, and both heats were closely contested, the winning horse coming out each time a little more than his length ahead. The first heat was run in 3 minutes and 51 seconds; and the second in 3 minutes 50 seconds. They are both among the finest horses that ever graced our turf; and it was the opinion of some of the most eminent connoisseurs, that for a two mile heat *Eagle* might challenge any horse in the United States. At the same time, but little less can be said of his competitor, considering how very little he had to brag of in beating the race.

The course was thronged with spectators, among whom were some who had not been to a race for a great many years—such was the prevailing excitement. Betting, we understand, was, with very few exceptions, even, and considerable sums were staked. *Eagle* is owned by Mr. Jacob Keith Wray, of Hampton; *Sally Hope*, by Messrs. James and George Garrison, of this town.—[*Norfolk Herald*.]

SPRING THE CHAMPION—SIX TO ONE.

On Saturday last, six fellows, some of whom had been employed in selling bargains in the shape of silk handkerchiefs, to those who are so weak as to suppose the tramping hawker can undersell the respectable tradesman, took a fancy to the Booth hall tavern, in this city, as their domicile for the day, and, tempted by the good things it afforded, drew largely on the landlord's stores. When the time of payment arrived, however, they seemed very unwilling to "come to the scratch," and fought shy of posting the cash. Spring, the renowned champion and landlord, civilly pressed his just demand, but met only with insolence and abuse. At length three of this "respectable" party, feeling their valour wax warm, and forgetting the kind of person they had to deal with, rose to pay the champion off in a kind of coin he has always been particularly handy in giving a satisfactory receipt for, in the shape of sundry remembrances that leave aches, and pains, and bruises, on those who have required such acknowledgment—in short, they vowed, with one accord, they would serve him out handsomely. Spring, however, declined the honour, and with equal temper and discretion, retreated from his furious assailants, stopping their blows, and smiling at their vain attempts to touch him. He immediately sent for a constable, but the guardian of the law declined to attend, for which, doubtless, Spring knows his remedy. Find-

ing that the law refused to protect him, and the fellows still insisted on thrashing him, with violent abuse in reply to his repeated attempts to induce them to be quiet, he at last very properly, goaded by the most outrageous provocation, determined to adopt the shortest method of quieting such characters, and requesting the persons present not to interfere, after every peaceable remonstrance had failed, he proceeded to expel the intruders: three of them rushed at him at once, and he was soon surrounded by the six. Perhaps in his best days he never showed such science, coolness, and courage, as he displayed on this occasion. With admirable quickness he stopped and returned in a manner his cowardly assailants will remember as long as they live; right and left, every blow told on their sconces, and on one occasion they were all down together. In less than twenty minutes they were completely brought to a stand-still, and the champion acknowledged the victor—coolly observing that he could thrash twenty such in an hour. They were all stout fellows, at least 13 stone each.—[*Hereford Journal*.]

MISCELLANEOUS.

NATURAL HISTORY.

ON THE TRANSPORTATION OF FISH FROM SALT TO FRESH WATER.

By J. Macculloch, M. D. F. R. S. &c. [*Jour. Roy. Inst.*]

You expressed a desire to know the progress which has been made in the transportation of fish from salt to fresh water, since the period at which I communicated the paper on that subject to your Journal. Mr. Arnold, who has carried on these experiments, at my wish, with great zeal, has succeeded in adding many more to the list, and both in respect to the physical fact, and to the question of economy, the success has been far greater than any one was willing to believe.

The list of the additional fish will be seen by comparing that which is appended to this letter, with the former one; and as the subject has excited considerable attention, and you will perhaps not object to a statement which may attract even more, by presenting, in the form of a prospectus, the essential facts and arguments. It is only by placing them in this form that they are very likely to produce the effect which appears desirable. I may now, however, subjoin some remarks which could not well find their place in such a statement, and which have been the result of more experience and attention. It is certain that the flavour of every fish which has yet been tried has been improved, and I can vouch for the superiority of the bass, the mullet, the loach, the atherine, and the sole, from the pond to those from the sea. This might be expected, for it is what happens notably with respect to oysters.

The sole becomes twice as thick as a fish of the same size from the sea, and its skin also becomes extremely dark, or nearly black.

The plaice also increases materially in thickness, and loses its spots. In some cases, it appeared three times as thick as in the sea. The bass also turns much thicker, and improves in delicacy.

The mullet also ceases to grow in length, but enlarges in breadth, and presents a much deeper layer of fat.

Crabs and prawns have found their way into the pond, as have loaches, and some other small fish; and while, formerly, there were none of the former two, the water is absolutely swarming with them. Thus, also, apparently, the eels have multiplied; as it is now easy to take a cart-load at once, where formerly a dozen or two was a large capture. I have thus, also, more distinctly ascertained, and to the satisfaction of Cuvier, who had been unwilling to admit it, that there are two species of fire

ter eel, distinguished by the comparative acuteness and breadth of the nose.

I have lastly to add an observation inadvertently omitted in the former communication, which may be used as an *a priori* argument for the possibility of this transplantation. It is, that oxygen is much more easily disengaged from fresh than from salt water. Consequently the act of respiration ought to be easier in the former than in the latter; and, therefore, it is not to be presumed, as it has been, that sea fish cannot respire fresh water.

As I have given the shad without its Linnæan name, I think it right to add, that our shad is yet unnamed; because the *Clupea Alosa* is the *Alose* of the French, common in the Seine, and on the other coast of Normandy: a fish as good as our own shad is detestable, and a decidedly different species of this troublesome and ill understood genus. If I have given the vulgar term rock fish, it is because I wish to reject the term *urasse*, for the present, as it stands a species; whereas the whole of this genus (*lobras*) is still in extreme confusion, and in one, which I hope to aid in rectifying, with the assistance of Cuvier's materials and our own species.

Prospectus of a plan for preserving and rearing Fish for the London Market.

From various observations and experiments, of which evidence is subjoined, it has been found, that sea fish will live and thrive, and also breed, in ponds and enclosures; and with regard to many, it also appears that it is indifferent whether the water is salt, or fresh, or brackish, or alternately fresh and salt.

It is also found that they may be fed in such enclosures, if necessary, as our domestic animals are; but that if sufficient numbers and kinds are placed together, they feed each other without requiring further care.

It is further observed, that every, or almost every species, improves in flavour and quality, as oysters are known to do, under transplantation.

It is well known, that, of all the fish brought to market, a very small proportion is in good condition, the rest being apparently ill fed; and hence the number of bad fish so well known to fishmongers.

It is much better known, that from bad weather or other causes, the supply of the market is very irregular. Thus, the public suffers when the supply is very short, and the merchant when there is a glut. It is not uncommon for a glut to come in London when the town is empty; and, on the contrary, for it to want fish when full.

The proposed plan, if executed, would bring the fish within our own power, to be taken alive when wanted, and, from being better fed, in greater perfection and more uniformly good. It would be like taking stalled oxen, instead of wild Scotch cattle. It would also enable the merchants to regulate the supply by the demand, and to better the public and themselves.

Instead of precarious as the supply is at present, it would be constant and abundant.

One of the main objects of the plan is to supply the market with fresh fish, and to prevent the complaint of the public, that the fish is stale and of no value.

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market, and more moderate prices, the consumption would be augmented.

There can be no objection, therefore, on the score of injury to fisheries. The plan is, virtually, one to preserve fish alive, after being taken, instead of suffering them to waste, to render them better in quality, and to supply them more regularly.

The plan, therefore, is, to enclose, in any convenient part of the Thames, (since the quality of the water is proved to be indifferent) a space sufficient for the purpose. A dock, or an excavation in the nature of one, would be unnecessary, as the water itself, in many places not navigable, might be enclosed by a palisade. In this, the fish would be received from the fishermen, by means of well boats, alive. Those which chanced to die would become the food of others. Many would breed, as they have been found to do, and thus also produce food. But they might also be fed, by means of butchers' offal, or other matters easily procured in a great city, as was the practice of the ancient Romans.

From the enclosure, the fish would be taken by nets, the kinds in demand and the quantity, selected, and the bad fish also returned for improvement. A steam boat would supply them to London daily, and to any market which might be established; and they might even be brought up alive, so that the unsaleable ones would not be lost.

The only capital required to be sunk, or advanced, would be in purchasing and enclosing a tract of water, and in the general establishment; possibly in stocking the pond. It could not be very large; but no estimate is now pretended to be given, nor any place pointed out; that needs not, however, be very near to London, as a steam boat would approximate any distance. After this, the fish would be purchased from the fishermen by contract; and the establishment beginning to sell, would then pay its way.

The details of evidence in support of the practicability of this scheme, are the following:

There are three or four sea ponds in Scotland where fish are thus kept; one in Orkney, belonging to Mrs. Stewart; one on the Firth of Forth, belonging to Sir Robert Preston; and one in Galloway, belonging to Mr. Macdowall.

On the Greek coast of the Adriatic, at Missolonghi and elsewhere, the same has been practised from immemorial time. It is the current practice also of Bermuda, where the inhabitants subsist chiefly on fish.

These are sea ponds as the water is salt. But in Sicily from the most ancient times also, the natives transport lobsters and crabs to a fresh water and muddy lake, for the purpose of improving them, as they also do mullet.

With respect to fresh waters, we have evidence of the same practice of the ancient Romans. From the accounts of the ancient writers, from the practice of the Roman farmers, and from the practice of the Republic, to go down to the present day, we find that they multiplied their fish in fresh water.

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and can supply the market when the weather prevents the boats from going out. It is remarkable also, that, since the introduction of the sea fish, the eels have multiplied a thousand fold, so as themselves to produce a considerable revenue. This proves that fish may be fed, merely by bringing different kinds together, as is the case in nature. It may be added; that the evidence from this pond is peculiarly satisfactory, as far as relates to the indifference which sea fish possess as to the quality of the water. Being embanked from the sea, and receiving an insufficient supply of fresh water in summer, it varies, so that while it is perfectly fresh in winter, it is nearly salt in very dry weather, and brackish in various degrees at intermediate periods. Here also, it is remarkable, that while the larger fishes have been placed there, many of the smaller ones, which formerly shewed no such desire, have introduced themselves through crevices in the sea wall, and that it is, in particular, crowded with crabs and prawns.

It is now necessary to subjoin a list of the fishes which belonging naturally to the sea, have been found to live in fresh waters. Some of these have been forcibly introduced, others seek it for themselves. If the list is still limited, it is because the rest have not been tried; for no fish on which the experiment has been properly tried has failed. When they have failed, it is because they were previously injured, or nearly killed in the taking or the transportation. The star indicates those which have been forcibly naturalized in Mr. Arnold's or some other pond.

Conger	*Bass
Torsk	Loach
Sprat	Red Loach
Shad	*Smelt
Alose (of the French)	*Atherine
clupea alosa	*Rock fish
Greater Lamprey	*Cuckoo fish
Lesser Lamprey	*Old Wife
Stickleback	*Sole
Cottus quadricornis	*Turbot
Mullet	Sand Eel
*Plaice	Rockling
Flounder	Whiting Pout
Red Flounder, pleuronectes roseus	Mackerel
White Whale	Herring
*Horse Mackerel	Crabs
Pollock	*Oysters
Prawns	*Mussels
Cod	Shrimps

There appears no reason why the turtle should not also be cultivated, whether they would breed or not. The peacock, pintado, pheasant, and common fowl, are the natives of hot climates, and have long been naturalized to cold ones; and there is far less difference between the temperatures of the water in different climates than between those of the air. An excellent turtle has been taken in the Thames at Salt.

For an unknown length of residence.

From the Journal of Philosophy.

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admission, as a

at West Point, and

other matters connected with that inst.

sons interested on the subject, an

application should be made

by letter to the Secretary of War. Ap

any time by the candida

himself, his father, or any of his relative

To the Secretary of War:

Sir,

I offer myself a candidate for the appointment of Cadet in the Military Academy, at West Point, and request that my application may be considered when the next selection shall be made to fill Cadet vacancies in that institution.

I was born in the state of _____; and now reside in the county of _____; or in the city, town, or village of _____, in the county of _____, and state of _____. My age is _____, and my character and qualifications will appear from the enclosed recommendations of (naming the persons recommending) and certificates of my teachers, professors, &c. (as the case may be, naming them.)

(Signed) A. B.

When application is made for another person, the letter will, of course, be modified to suit the circumstances of the case.

No preference will be given to applications on account of priority; nor will any application be entered on the register where the candidate is *under* or *over* the age established by law: nor will any application be considered unless the age be stated, and evidence furnished in support of the character and qualifications of the candidate. No application will be entitled to consideration unless the place of residence of the candidate be truly stated. By place of residence, is meant the fixed abode or domicile of the candidate, or of his family. Where the candidate may have removed from the residence of his family and settled in a different county or state, he must be reported from that county or state; but where he is a transient resident of a different county or state from those in which his family live (at school or college for instance,) then he will be located at the abode of his family.

Applications, if not renewed annually, will not be re-considered: this may be done by letter to the Secretary of War, merely stating the fact of such renewal.

Qualifications necessary for Admission into the Military Academy.

Each candidate, previous to his being admitted, must not be under fourteen, nor over twenty one years of age; nor of less height than four feet nine inches; must be free from any deformity, disease, or infirmity which would render him unfit for the military service, and from any disorder of an infectious character: he must be able to read and write well, and to perform with facility and accuracy the various operations of the four ground rules of arithmetic,—of reduction,—of simple and compound proportion;—and of vulgar and decimal fractions.

Applications for Cadet appointments when received at the War Department, are referred to the Chief Engineer, who is the Inspector of the Military Academy, has a general supervision over the affairs of the institution, and is charged with its correspondence. They are regularly arranged under the heads of their respective states and territories, and entered in the register of applicants, which, with the records and papers connected with the Academy, is kept in the Engineer Department, which is under the direction of the Secretary of War, and situated in the War Office. In the month of February or March annually, selections are made by the Secretary of War from the applicants thus registered to fill the anticipated or estimated vacancies for the year: and the selected candidates are *conditionally* appointed Cadets. They are notified accordingly by letters of appointment, in which they are directed to inform the Department of the acceptance or non acceptance of their appointments: if they accept, their acceptance must be accompanied by the written assent of their parents or guardians to their (the Cadets) signing articles, by which they become bound to serve the United States five

Place and date.

years, unless sooner discharged. They are enjoined to repair to West Point and report themselves to the Superintendent of the Military Academy, between the 1st and 20th of June ensuing; and in the last week of that month, they are examined by the Academic Board in relation to the initiatory qualifications, as above stated. If they pass this examination, they are admitted in probation till the ensuing examination in January: and if they pass that examination in a satisfactory manner, the fact is reported to the Secretary of War, when warrants, dated back on the 30th of June, are made out and transmitted to them, and they then become Cadets, and entitled to all the benefits of that appointment.

Should any of the newly appointed Cadets fail to repair to West Point at the time prescribed, and not render a satisfactory reason for such failure, their appointments are considered as cancelled.

Cadets found unqualified to pass their examination for admission, are rejected: and it is the duty of the Academic Board to make to the Inspector of the Military Academy, a report of such cases, to be laid before the Secretary of War, setting forth the causes of their failure, and their particular points of disqualification. Should the legal complement of Cadets (250) be not full, and any of these rejected candidates be deemed worthy of a re-examination, and signify a desire to be allowed this indulgence, it is granted to them in the last week of the succeeding August.

Should Cadets who passed their initiatory examination, fail to pass the probationary examination, they, after that event, cease to be members of the institution.

After each semi-annual examination, the Academic Board report to the Secretary at War the names of all such Cadets of the 4th class as have not made due proficiency in their studies, or whose general conduct has not been satisfactory, and whom they may deem it advisable for the Secretary of War to discharge; the Board noting particularly the moral and military conduct, the habits in regard to study, and the intellectual capacity of each Cadet.

An annual examination of the classes, preparatory to their advancement, takes place on the first Monday in June, in presence of a Board of Visitors, and such other scientific and literary gentlemen as may be invited to attend. Any Cadet found deficient at this examination in the studies of his class, will not be advanced to the next higher class; and if, in the opinion of the Academic Board, his deficiency is to be attributed to incapacity, or want of application, his case is represented to the Secretary of War, in order that he may be discharged.

Though fourteen is within the legal age for admission, yet long observation has demonstrated, that in the general, the proper and suitable age is between 16 and 17; and that youths of 14 must labour under serious disadvantages from the mental immaturity, the embarrassing diffidence, and scanty knowledge incident, in most cases, to so tender an age.

The appointments, as before stated, are made annually in the month of February or March; and are distributed equally throughout the various sections of the country, in proportion to the number of Senators and Representatives in Congress.

As a general remark, it may be observed, that no certain information can be given as to the probable success of a candidate for admission into the Military Academy, before the arrival of the period for making the selections from the several applicants, as the number of vacancies cannot, with any accuracy, be anticipated. Persons, therefore, making applications for Cadet-appointments, must not expect to receive information on this point, nor that their inquiries or letters in relation to it, will be answered. Their applications will be regularly registered, to be considered at the proper time.

ALEX R. MACOMB, Major General,
Inspector of the Military Academy.

UNSTOPPING THE EARS OF THE DEAF.

[From the Richmond Compiler.]

I am persuaded that in the great majority of cases deafness is caused by some stoppage in the external organs of the ear. If the nerve be sound I can see no impossibility in curing the disease. Let a deaf person put a watch into his mouth, if he can hear the ticking distinctly, he may be assured that the nerve is not injured, and that there is the strongest probability of his being relieved by removing the external obstruction. I do not positively say, because the deaf person does not distinctly hear the ticking of the watch that therefore the nerve is insensible; for it may happen that the interior tube from the mouth to the ear, may be closed up as well as the external duct to the tympanum. But, if there be any reason to believe that the nerve is good, the deaf person should not despair, but resort to the proper expedients for relief. I am acquainted with a gentleman from whom I have received the following account of his deafness and his cure.

He had been a long time incapable of hearing: As he says himself, he was as deaf as a post. Even the voice of a Stentor could not reach him. Some time since, he was fortunate enough to meet with a young physician, bold, and persevering, who told him if he would put himself under his practice, he was satisfied he could administer relief. The deaf gentleman was very far from being sanguine: indeed, he did not permit himself to entertain much hope, but determined to try the experiment. The first thing the physician did was to procure a powerful syringe, more than a foot long and two or three inches in the pipe. With this he began to inject warm water copiously into the ear; then varying with a solution of Windsor soap, and sometimes with warm milk just drawn from the cow. Occasionally pluggets steeped into oil of almonds were introduced into the ear, and the ears were tied up with handkerchiefs. The gentleman piqued himself on his perseverance, and well was he rewarded for it. For six days there was no sensible good effect produced, but after that time, and on repeating the injections with the syringe, a small quantity of hardened wax came out, and for the first time the voice of the physician broke upon the ear of the patient. This encouraged him to the repetition of the experiments, and a piece of wax, as large as an almond, and perfectly hard, came out; and from that time to this, the gentleman has heard as well as any of his acquaintances. The only protection he uses is in case he catches a little cold, to tie up the head, or use a little cotton dipped in oil.

He is now convinced that in nine cases out of ten, deafness proceeds from similar causes, and may be cured. We have persons professing to cure most of our diseases; we have oculists for the eye, dentists for the teeth, ladies to cure stammering (I think the tongue falls properly within their jurisdiction.) Why have we not professional gentlemen who make it their business to "unstop the ears of the deaf?" I am sure that if I were as deaf as some of my friends, and all sort of communication "at that sense quite shut out," I would freely give a good thumping fee to any person who would cure me. I would spare neither money nor pains to recover one of the five senses, and that so important a one, which Providence has given me. In fact, I am not very certain that the time will not come when surgery will be able to cure those who are born deaf, as she does those who are born blind. But hypothesis apart All I now abide by is the fact I have stated.

PHILOS.

SYBILINE ORACLES.

[From the Richmond Whig.]

Extracted from an old edition of Merlin's Prophecies, supposed to have been written about a

sand years ago; imprinted at London by John Hawkins, in the year 1530. For an account of this extremely valuable and scarce book, vide Swift's works, vol. 9. p. 214, ed. 1766.

I.
When the savage is meek and mild,
The frantic mother shall stab her child.

II.
When the cock shall woo the dove,
The mother, the child shall cease to love.

III.
When men, like moles, work under ground,
The lion a virgin true shall wound.

IV.
When the dove and cock the lion shall fight,
The lion shall crouch beneath their might.

V.
When the cock shall guard the eagle's nest,
The stars shall rise all in the west.

VI.
When ships above the clouds shall sail,
The lion's strength shall surely fail.

VII.
When Neptune's back, with stripes is red,
The sickly lion shall hide his head.

VIII.
When seven and six shall make but one,
The lion's might shall be undone.

SOLUTION.

Verse 1st.—The settlement of America by a civilized nation is very clearly alluded to in the first line. The frantic mother is Britain—America the child.

Verse 2d.—The cock is France, the dove America—Columbia: their union is the epocha when America shall cease to love Britain; for so I understand the prophecy, in which there is manifestly an equivocal; which is one of the most striking characteristics of the ancient oracles.

Verse 3d.—The siege of Yorktown, where approaches were carried on by working in the earth. In the second line there is another equivocal. We are told by Mr. Addison in his Spectator that a lion will not hurt a true maid:—this at first seems contradicted by the Prophecy: but it will be found, that at the epocha referred to, the virgin, or Virginia (as all North America was then called in Europe) shall wound the lion, viz: Britain, which shows the precise time when the oracle should be accomplished.

Verse 4th.—Alludes to the alliance between France and America; before whose might Great Britain crouched.

Verse 5th.—This certainly refers to the period when France (the cock) guarded the home of Americans (the eagle's nest,) and assisted the States (the stars) to attain their independence—that is, to rise in the western hemisphere.

Verse 6th.—It is very remarkable that the properties of inflammable air by which balloons first traversed the upper regions, were then first discovered, and they are here evidently called ships.

Verse 7th.—When America's navy covers the sea with red stripes, Britain's will be humbled.

Verse 8th.—The thirteen States first confederated.

RECIPES.

COMPOSITION FOR RESTORING SCORCHED LINEN.

Boil, to a good consistency, in half a pint of vinegar, two ounces of fuller's earth, an ounce of hen's dung, half an ounce of cake soap, and the juice of two onions. Spread this composition over the whole of the damaged part; and, if the scorching were not quite through, and the threads actually consumed, after suffering it to dry on, and letting it receive a subsequent good washing or two, the place will appear white and perfect as any other part of

VULGAR ERROR RESPECTING THE PUTTING OF SPIRITS INTO BOOTS AND SHOES TO PREVENT THE EFFECTS OF COLD.

The custom of pouring brandy into the boots or shoes, when the feet have got wet, with a view to prevent the effects of cold, is a practice which (though very common) is founded in prejudice and misconception, and often proves fatal, by bringing on inflammation and consequent obstruction in the bowels. This practice is adopted upon the supposition, that, because spirits, when swallowed, excite an universal warmth and restore the circulation in the extremities, they must do the same when applied to the extremities themselves. But the reverse happens. Fluids, when evaporating, produce cold; and the lighter or more spirituous the fluid, the more quickly it evaporates, and the greater is the degree of cold generated. This may be proved by a very simple experiment. If one hand be wetted with spirit and the other with water, and both are held up to dry in the air, the hand wetted with spirit will feel infinitely colder than the other; or if the bulbs of two thermometers be so treated, the mercury will be observed to fall much more rapidly and extensively in the one case than in the other.—Whatever danger, therefore, arises from cold or damp feet, it is generally enhanced by the practice alluded to. If such a remedy is to be at all employed, it ought, undoubtedly, to be taken into the stomach.

TO PREVENT SNOW WATER OR RAIN FROM PENETRATING THE SOLES OF SHOES OR BOOTS IN WINTER.

This simple and effectual remedy is nothing more than a little bees-wax and mutton suet, warmed in a pipkin, until in a liquid state; then rub some of it slightly over the edges of the sole where the stitches are, which will repel the wet, and not in the least prevent the blacking from having the usual effect.

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 29, 1826.

§7-RICHARD HULL & SONS are now the only agents in the state of Virginia, authorized to receive subscriptions for this journal—except Mr. COTTON, who has authority to receive from those who get their papers from the Richmond post office.

§7-The Trustees of the MARYLAND AGRICULTURAL SOCIETY, are notified that their next meeting will be held on Thursday, the 11th of January next, at the residence of John B. Morris. A full meeting is earnestly called for. Should indispensable business necessarily cause the absence of any of the members from any of the future stated meetings, the propriety of giving notice of that fact is respectfully suggested.

§7-The thermometer, in this city, at 10 o'clock yesterday morning, stood at 15 degrees.

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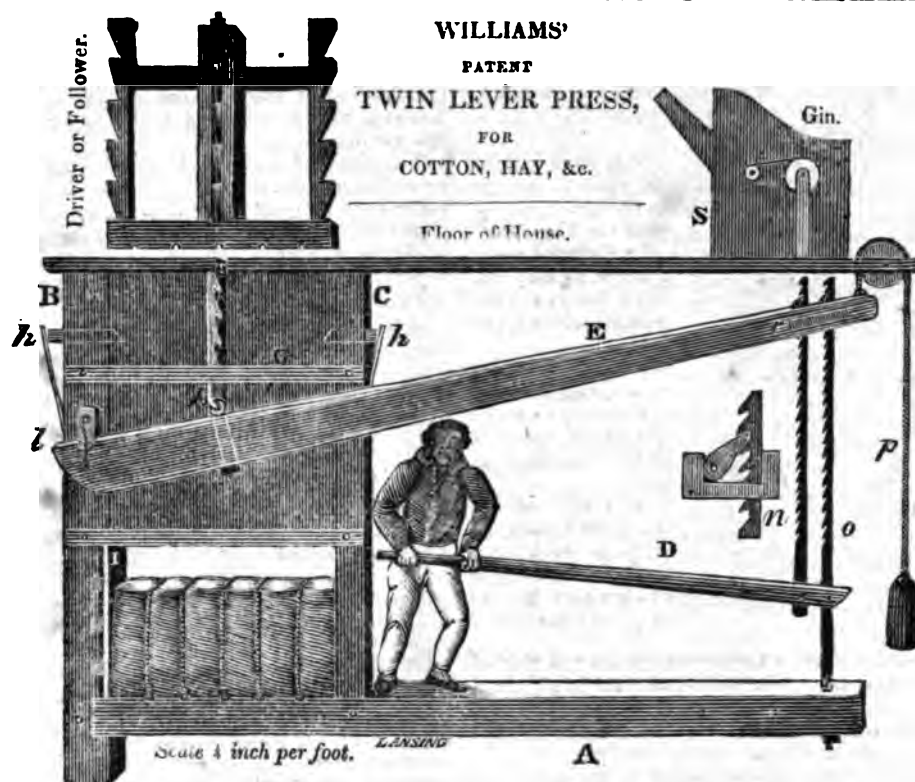
Sketches on Agriculture, by A. W. Foster, Esq. of Greensburg, Pa., President of the Westmoreland Agricultural Society—Seed Corn and remarkable Wheat—On the construction of Ice Houses—How to prevent, and how to cure the Sore Tongue in Horses—Culture of Tulips, continued—Poetry, The Mother—The Norfolk Race—Contest between Spring, the Champion, and six Pedlars—On the transportation of Fish from salt to fresh water, by J. MacCulloch, M. D. F. R. S. &c.—West Point Military Academy, qualifications necessary for admission, and mode of application—Unstopping the ears of the Deaf—Sybiline Oracles, supposed to have been written a thousand years ago—Recipes. To restore scorched Linen; Spirits do not prevent the effects of cold in boots or shoes; To prevent snow or rain from penetrating boots or shoes.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . . .	lb.	6	10	9	12
BEES-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16½	20	22
Havana,	—	14	17		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . . .	—	13	16	16	18
Dipt,	—	11	13		1
CHEESE,	—	8½	12	12	15
FEATHERS, Live, . . .	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	5 50	6 00		
FLAXSEED,	bush	1 00	1 10		
FLOUR, Superfine, city,	bbl.	4 87½	5 00		
Fine,	—	4 75			
Susquehanna, superfi.	—	5 00		5 50	none
GUNPOWDER, Balti. . .	25 lb.	52	53		
GRAIN, Ind. corn, yellow	bush	52	53		
white	—	1 05½	1 12½		
Wheat, Family Flour,	—	90	95		
do. Lawler, & Red, new	—	95			
do. Red, Susque. . .	—	75			
Rye,	—	1 22	1 25		
Barley, Eastern . . .	—	90	1 00		
Do. country	—	4 50	5 00	5 50	
Clover Seed, Red . . .	bush	87	1 00		
Ruta Baga Seed, . . .	—	3 50			none
Orchard Grass Seed, .	—	1 25	1 50		
Mangel Wurtzel Seed,	—	4 00	5 00		
Timothy Seed,	—	40	50		
Oats,	—	1 25	1 50	2 00	
Beans White,	—	200	210		
HEMP, Russia, clean, .	ton	120	206		
Do. Country	—	20	25		
HOPS, 1st sort, (1826)	lb.	7	10	12	
HOGS' LARD,	—	6½	8		
LEAD, Pig	lb.	7½	8		
Bar	—	21	23	32	
LEATHER, Soal, best,	—	30	32	37½	75
MOLASSES, sugar-house	gal.	61		9	
Havana, 1st qual. . .	—	1 50	1 62½		
NAILS, 6a20d.	lb.	1 75			
NAVAL STORES, Tar, . .	bbl.	1 75			
Pitch,	—	1 75			
Turpentine, Soft, . . .	—	35		40	
OIL, Whale, common, .	gal.	80	85	88	
Spermaceti, winter . .	—	11 00	11 50		
PORK, Baltimore Mess,	bbl.	8 50	9 00		
do Prime,	—	3 50			
PLASTER, cargo price,	ton.	1 50			
ground,	bbl.	32	4	5	
RICE, fresh,	lb.	12	14	18	20
SOAP, Baltimore White,	—	5½	8	10	12
Brown and yellow, . .	—	36	38		50
WHISKEY, 1st proof, . .	gal.	75	1 00	1 25	
PEACH BRANDY, 4th pr	—	31		50	
APPLE BRANDY, 1st pr	—	12 50	13	14	15
SUGARS, Havana White,	c. lb.	10 00	10 50		
do. Brown,	—	7 15	9 10	10	11
Louisiana,	—	19	22	20	22
Loaf,	—	70		1 00	
SPICES, Cloves,	—	7	12	12	18
Ginger, Ground, . . .	—	15	16	25	
Pepper,	—	43		75	
SALT, St. Ubes,	bush	54		75	
Liverpool ground . . .	—	8 50		12	
SHOT, Balt. all sizes, .	cib.	2 50	3 00	3 50	4
WINES, Madeira, L. P.	gal.	1 10	1 15	1 50	2 00
do. Sicily,	—	1 05	1 10	1 50	1 75
Lisbon,	—	1 65	1 85	2 50	
Port, first quality, . .	gal.	30	35		
WOOL, Merino, full b'd	lb.	20	21		
do. crossed,	—	18	22		
Common, Country, . .	—	20	25		
Skinnners' or Pulled, .	—				

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AGRICULTURE.



REFERENCES.

A. Bed, 16 feet long, 25 by 12 inches.	r Crossbar, 38 feet long, 12 by 6 inches.
B. Cheek, 11 do. 25 12 do.	k Hooks, 37in long, 2 by 1 inch.
C. Cheek, 10 do. 25 6 do.	To first projection, 16in. the others 8½ inches.
D. Handle, 10 do. 6 4 do.	Eyebolt welded in, 17 inches long, 14 square.
E. Levers, 17 do. 16 6 do.	a. Bar, 78in. long, 1½ by ¾ in. teeth 1in. apart.
Driver, 4 do. 22 6 do.	o. Bar, 102in long, 12 by ¾ in. teeth the same.
Do. ends, 4 do. 4 4 do.	Eyebolt to do. 14in. long, 1in. square.
Follower, 5 do. 22 8 do.	Palls, 2½ 2 by ¾
G. Bars, 6½ do. 5 4 do.	Rests of do, 8 5 ½
h. Keys, 14in. 4 4 do.	Bolts, 36 ¾ in round.
I. Plank, 36 do. 22 1 do.	Cap of Driver, 22in. long, 2½ by 1in.
Sides, 69 do. 60 1½ do.	Staples for do. 6in. shanks ¾ in. square.
L. Fulcrum, 38 do. 8 3½ do.	Joints of Levers, 8in. long, ¾ in. do.

Cotton is the most valuable export of this country, and it should be prepared in the best manner for shipping. It should never be put in round bales, it injures its appearance—the carriage is higher, and it must be compressed for shipping. It should be packed in damp weather, or as soon as ginned; it loses in weight by remaining open; hence the importance of a press in the house. The bales should have from 5 to 7 ropes, and be 4 or 5 feet long; if two widths of bagging, 21 inches square, and weigh 300lb. If two and a half widths, 22 by 30 inches, and weigh 400lb. (Cotton can be pressed too hard;) the latter size is preferred, because three bales of 400lb. can be pressed soon than four bales of 300lb., and freight and storage is less. Every person owning a gin, should have a good press built in the gin house; the most important points are, that it should be cheap, durable, not liable to get out of order, and worked with few hands expeditiously. Horizontal presses will not make handsome bales, the lower end is harder and larger than the upper; the cotton cannot be so well stowed in the box. Cast iron cog wheels cannot be depended upon in cold weather. Iron screws are costly, work slow, with manual power, and have great friction. Wood screws require much room; it is inconvenient putting in the cotton; are not durable, three fourths power lost in friction. Levers have the least friction of all powers; but a single lever being over the box, there is no facility for putting in the cotton; these observations are founded on experience.

The above drawing represents a press placed under the gin; the driver is taken out through the floor and set aside; the cotton is then put in with great facility. Instead of one lever over the box, I have two, one on each side, framed together; strong iron hooks, fast to the levers with eye-bolts, play through openings, and take hold of iron bars in the driver; the two iron bars and palls are like the rag of a saw-mill; the rest and pall, (shown large at n) set on the cross-piece, and both bars go through it; the handle is worked as in pumping; the palls feed themselves; what n gains, o holds; when the levers are down to D, the springs force the keys into scarfs in the driver, and confine it down, while the levers are raised for a new hold: this operation is repeated eight times to complete a bale, and can be done in fifteen minutes. After the bale is roped, the wedges are driven back, which loosens a moving plank, I, and the bale is relieved and easily rolled out. The power of this press is so great, that I have put 460lb. of cotton into five yards of bagging, with one man; and I have taken a bale of hay, packed with a screw-press, weighing 476lb. and pressed it one-third smaller, occupying, when thus pressed, a space of only twenty-two cubic feet; every part is

doubly guarded from danger; the operator cannot be hurt should any part break; the irons are all wrought, and can be repaired by any smith—the hooks feed themselves, and cannot be forced out of place; the strength of the iron is increased, as the pressure requires; at the first hold, the iron is three-fourths of an inch square; at the last hold two by one inch on each side;—a short handle can be used first, to expedite the operation; it may appear complex in the drawing, but it is simple in its operation.

There can be more bales packed in it, than in any other, with equal force. By making the bed, levers and handle longer, there is more power, but slower work. White oak is the best timber, but yellow pine is very good for bed, cheeks, levers and plank. The driver and levers can be raised by pulley or winch, but are more easily managed when balanced by weights—stone will do for weight, and can be carried outside the house. The driver may be connected to the levers by chains, instead of hooks, but the latter is most convenient. The levers may be drawn down by windlass, &c., but there is no way so powerful, compact and durable, as the toothed bars; they are placed three inches apart. The hooks bear, the three last times, on an iron bar, on top of driver. My patent embraces the use of the twin levers in any way.

The cost is \$20 for patent—\$30 for irons—the carpenter's work, worth \$25; there are now upwards of fifty presses in operation in Virginia and Carolina. I subjoin the opinion of a few men who used screws, and other presses.

This press appears to possess every advantage which can be desired; it may be put up in a gin house; is easily worked; simple in its construction; of immense power; loss by friction very little; the press box filled with great facility, and must, I think, supersede all others. FRS. H. SMITH.

We have used one of Mr. Williams' cotton presses, at the Blandford mills, for several months, in which we have packed bales weighing upwards of 400lbs. each, into less than five yards of bagging. We are of opinion, that when well built, these presses are more convenient, compact, powerful, and durable, than any other we know of—and as such recommend them to the public.

R. F. HANNON,
R. H. TALIAFERRO.

Petersburg, May 17, 1826.

We have seen the cotton press, built in this city, by Mr. Charles Williams, and several bales of cotton that were packed in it; and think it has many important advantages over any other mode of packing cotton that we are acquainted with.

WILLIAM BOYLAN,
JOSEPH GALES,
JOHN BELL,
LARKIN FOX.

Raleigh, August 28, 1826.

One of these presses can be seen in operation, in the city of New York, at Messrs Hunt and High's, 74 Wall street; they will furnish patents, models, and irons, and ship them to any sea port; they can also be obtained of S. Cochran, Richmond, Seavra Thayer, Petersburg, Va., I. C. Stedman, Raleigh, and T. Nash, Milledgeville, Geo.

CHARLES WILLIAMS.

New York, November 25, 1826.

UNITED AGRICULTURAL SOCIETY OF SOUTH CAROLINA.

A meeting of the delegates of the different Agricultural Societies of South Carolina was held in Columbia, Dec. 4, 1826; when Mr. W. B. SEABROOK was called to the chair, and J. N. WHITNER appointed secretary.

Certificates were presented from the different Societies, of the election of the following gentlemen as delegates to attend the United Agricultural Society, viz.

South Carolina Agricultural Society—Messrs. T. Smith, Jr., James Ferguson, James Rose, and Wm. Washington.

St. Andrew's Society—Messrs. James Cuthbert, and Wm. Cattell.

Beaufort Agricultural Society—Messrs. William Elliott, W. J. Grayson, Stephen Elliott, Jr., and Col. Jacobs.

Agricultural Society of St. John's, Colleton—Messrs. Whitemarsh B. Seabrook, Wm. G. Baynard, John W. Matthews, and John Townsend.

Farmers' Society of Barnwell—Dr. J. S. Bellinger, Angus Patterson, W. J. Duncan, B. H. Brown, and J. D. Edwards.

Pendleton Farmers' Society—Messrs. David Sloan, Thomas Pinckney, Jr. John E. Colhoun, R. Anderson, and J. N. Whitner.

St. Helena Island Society—Dr. John A. P. Scott, and T. A. Coffin.

St. Paul's Society—Messrs. G. H. Manigault, W. Wilkinson, and John S. Ashe.

Winyaw Farming Society—Messrs. Thos. Carr, E. Flagg, J. W. Alston, B. Green, H. A. Middleton, and J. H. Reid.

Edgefield Agricultural Society—Messrs. Eldred Simkins, Senr., Jesse Blocker, and Andrew P. Butler.

Each of the foregoing Societies being represented, a committee was appointed, consisting of Messrs. W. Elliott, Bellinger and Seabrook, to revise the constitution proposed by a previous meeting of delegates, for the government of the United Agricultural Society, to report on the 6th inst. and the meeting adjourned.

According to adjournment a meeting was held on Wednesday the 6th inst. and the following delegates attended.

Messrs. W. B. Seabrook, J. W. Matthews, J. Townsend, J. Cuthbert, Wm. Cattell, T. Smith, Jr., James Rose, William Elliott, Dr. J. S. Bellinger, A. Patterson, B. H. Brown, J. D. Edwards, Dr. J. A. P. Scott, J. S. Ashe, T. Carr, J. W. Alston, C. Flagg, T. Pinckney, Jr., D. Sloan, R. Anderson, J. Blocker, A. P. Butler, and J. N. Whitner.

The following Constitution was considered and adopted.

The undersigned Agricultural Societies, with a view to establish an union, to ensure an accordance in their sentiments and measures, to found an Agricultural School and a Professorship of Agriculture, to collect and disseminate information, and the more effectually to promote the permanent interest of their vocation, do agree to unite under the name and style of *United Agricultural Society of South Carolina*, and to adopt the following as their articles of association.

Article I. There shall be held annually on the first Monday in December, a general meeting of the Societies by delegation at Columbia, S. C.

Art. II. It shall be incumbent on the Societies composing the union, each to appoint not less than two, nor more than five members; and it shall be their duty to furnish the delegates with a certificate of their appointment after the following form: At a meeting of — on the — day of — 18—, A. B. C. D. &c. were duly elected delegates to represent this Society in all meetings of the United Agricultural Society of South Carolina, for two years, commencing from the first Monday in December.

Art. III. The officers of the Society shall consist of a President, two Vice Presidents, Treasurer, Recording Secretary, and a Committee of Correspondence and Communication, (who shall elect their Chairman by ballot,) to be composed of one member from each of the constituent Societies.

Art. IV. It shall be the duty of the President to

preserve order in the general meetings, and perform all other duties appertaining to his office.

Art. V. In the absence of the President, at any meeting, the senior Vice President to take the chair, and in the absence of the President and Vice Presidents, the Society to appoint a President from the members present. If any other officer is absent, the Society shall nominate a member to supply the vacancy *pro tem*.

Art. IV. The Recording Secretary shall faithfully register the proceedings of the Society, and preserve all papers entrusted to his charge.

Art. VII. It shall be the duty of the Treasurer to receive all subscriptions from the different constituent Societies, pay out such sums as may from time to time be authorised by the Society, and shall submit an annual report of receipts and expenditures.

Art. VIII. It shall be the duty of the Committee to collect such important facts and suggestions relating to agriculture and rural economy as may be offered in their respective districts or elsewhere, and to communicate them to the Chairman one month before the annual meeting.

Art. IX. It shall be the duty of the Chairman of the Committee, who shall be *ex officio* Corresponding Secretary, to collate and digest all such reports as may be presented to him by the members of the Committee, and present them to the Society, (to be used at their discretion,) at the general meetings in Columbia.

Art. X. It shall be incumbent on the Societies composing the union, to transmit to the United Society, at each general meeting in December, a fair copy of all the important original communications which may have been read before them.

Art. XI. Any Society formed for the same general object, may become a member of the Union by sending delegates to the general meeting, who shall subscribe to these articles for their Society.

Art. XII. At all meetings, each Society therein represented by a delegate or delegates, shall be entitled to one vote.

Art. XIII. Until the Society shall adopt a plan of raising funds to meet its exigencies, each Society agreeing to send a delegate or delegates and signing these articles, shall pay into the treasury twenty dollars.

Art. XIV. A majority of the Societies composing this union shall form a quorum to transact ordinary business, but a less number may meet and adjourn from day to day. Two-thirds thereof shall form a quorum to appropriate money, but it shall require a concurrence of a majority of the whole to alter the constitution.

The meeting then organized the United Agricultural Society by electing its officers

Whitemarsh B. Seabrook was elected *President*.

Col. Thomas Pinckney, Jr. 1st *Vice President*.

Thomas Smith, Jr. 2d *Vice President*.

Joseph N. Whitner, *Recording Secretary*.

William Elliott, *Treasurer*.

And Gen. F. Carr, W. Cattell, J. Rose, J. W. Matthews, Dr. J. S. Bellinger, R. Anderson, Dr. J. A. P. Scott, J. S. Ashe, E. Simkins, and W. Elliott, were elected a Committee of Correspondence and Communications.

At a subsequent meeting of the United Agricultural Society, the following resolutions were submitted and adopted.

Resolved, That it be recommended to every member of this Society, to use his best efforts for promoting in his respective district, the culture of some staple suited to our climate, and which may divert the attention of planters from the culture of cotton, now produced in excess.

Resolved, That a premium of forty dollars be awarded to any experimentalist, who shall succeed in introducing such new culture on a space of ground not less than one acre.

An original communication was also received from Mr. N. Herbemont on the cultivation of the grape, which was ordered to be published in the *American Farmer*; superior specimens of domestic wines, by Messrs. S. Maverick and N. Herbemont; homespun osnaburga, by Mr. J. S. Deas; and peas, for distribution amongst the members, by Dr. J. Ramsay, were severally presented to the Society at this meeting.

Two hundred copies of the constitution and general outlines of the proceedings of this Society, were ordered to be printed for distribution amongst the constituent Societies. Also ordered that the editors of the *State Gazette* and of the different Charleston papers, be requested to give each one insertion of the same.

A true extract from the minutes.

JOSEPH N. WHITNER, *Rec. Sec.*

PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE.

Stated Meeting, December 19, 1826.

Dr. Mease, Vice President, in the chair. The following communications were read.

On brewer's grains as a food for store pigs. The advantage stated to attend this food, is its being sufficiently nourishing to promote the development of the frame, without too great a tendency to fatten; it is also cheap. Mr. Bolton, of the Germantown brewery, put up forty bushels in the year 1825, and used them during the summer following. In September last, one of the casks containing grains was opened, which had been filled in December, 1825, and with the exception of a few on the top, (which, however, were eagerly devoured by the pigs,) the grains were found as fresh as if they had been mashed the preceding day. Mr. B. sinks a pipe or cask in the earth, so deep that its top is level with the surface; the grains are then put in, and well trodden: salt, in the proportion of one peck to twenty bushels, is sprinkled through the mass; the head of the cask is let into it, about six inches, and covered to the level of the chimneys with clay; a loose board cover is then thrown over the cask, and the contents are ready for use, in one or twelve months, as may be required.

2. A letter from Thomas Appleton, U. S. Consul at Leghorn, to the chairman, enclosing an abridged prose translation of the admired Italian poem "*Il Cappello di Paglia*," or the Straw Hat, by Signor Marco Lastri, late President of the Academy of Agriculture at Florence; containing details of sowing the seed, gathering, preserving, and separating the straw, and the various preparatory operations to fit them for use in the manufactory of Leghorn hats.

It is pleasing to see the various products of the soil call forth the muse. Dr. Granger in his poem, "*The Sugar Cane*," has given the whole agriculture of that plant, and the manufacture of sugar. Philips details the culture of the apple, and the conversion of its juice into a delicious drink. Dyer, in "*The Fleece*," gives the management of sheep and of wool. The culture of tobacco has been described in classical Latin by a poet of Brazil; and Signor Lastri now shows how an important and valuable manufacture may be produced from the skillful use of cheap raw material. It is to be wished that some American would favour us with a similar fine poem.

3. A letter from Mr. — of Jefferson county, Virginia, the chairman, with specimen of very long potatoes, of a most prolific nature. Three peck produced forty-two bushels! Their origin is unknown. Mr. Griggs purchased them off a raft which came down the Potomac. Some members present recollected having planted potatoes apparently similar to those sent by Mr. G. some years since he resided in the same

but the quality not sufficiently farinaceous for the table. For hogs, or cattle, they would be found a profitable winter food.

4. Dr. Tidyman, of South Carolina, an honorary member of the society, sent to the chairman, with a letter, some seeds of the sweet potato, which were distributed. The planters of South Carolina, finding that from long cultivation of the same varieties of the sweet potato, they are degenerated, have determined to improve them by sowing the seeds. It was upon this principle that the "Philadelphia Society for promoting Agriculture," proposed at the last annual meeting "a premium for the best potatoes the growth of the seeds of the apples." The highly farinaceous "foxite" potatoes are said to be the result of this process.

The chairman mentioned, that Messrs. Mayland & Son, tobaccoists, of Philadelphia, had received from Cuba a quantity of the seed of the first quality tobacco produced in that island, called "*Buella Abazo*." This information is here given for the benefit of the cultivators of tobacco. The exportation of this seed, or of the tobacco produced from it, is prohibited, except on the king's account.

The following donations were received—

From Robert Barclay, Esq., of Berry Hill, Eng., through the President of the Society, Loudon's Encyclopædia of Agriculture, and a translation in blank verse of the first book of the Georgics of Virgil, with valuable notes, by the Rev. Robert Hobblyn, of Cornwall. The three first numbers of a New Agricultural Magazine, from the editor, J. C. Loudon, of London.

[*U. States' Gaz.*]

WOOLLEN MANUFACTURES.

[The object of the following memorial is so closely connected with the interests of all classes of agriculturists, and especially those of the wool-grower, that we consider ourselves justified in appropriating, for recording it, the space which it occupies. It is not deemed probable that the prayer of the memorialists will be granted at the present session of Congress; but the petition will no doubt be preferred again and again, for agriculturists constitute almost the only class in our country that seldom confer about and concert for their peculiar interests, and never persevere in measures to meliorate and protect them. For ourselves, we apprehend that a higher protecting duty to insure a greater profit to the capitalist whose money is invested in woollen manufactures, would give rise to smuggling in a degree that would defeat the object proposed. We content ourselves, however, for the present, with registering the memorial as containing the doctrine and the objects of those who advocate the policy of premiums to be established by act of Congress for insuring a profitable result to a particular speculation.]

MEMORIAL

Adopted at the meeting of Woollen Manufacturers, recently held in this city.—[Boston]

To the honourable the Senate and House of Representatives of the United States of America, in Congress assembled—

The subscribers, citizens of the United States, respectfully represent, that they deem it their duty to solicit your attention to the present state of the manufacturers of woollen goods in this country. When the last act, revising the tariff, was passed, it was anticipated that sufficient encouragement and protection would be thereby secured to American manufacturers. In the year following, the passage of that act, the manufacturers of woollen goods in England, prosecuted their business with unexampled energy and activity, and exported vast quantities of their fabrics to every part of America, where they were sold to great profit. The circum-

stance, together with the above mentioned fact, induced many of our citizens to invest large amounts of capital in manufactories, confidently believing that they should not yield to foreign manufacturers in a *fair competition*, and that *such* a competition would be secured to them by law. Subsequent experience has taught us, that the vast business done by the British manufacturers was the result of improvident speculation, and was not required by the wants of consumers. The quantity of manufactured goods far exceeded the demand for them, and hence has arisen the unexampled embarrassments and sufferings of the English nation; sufferings which have affected the manufacturers in this country severely, and from which they cannot be relieved, without the aid of their national government. The English manufacturers have exported their goods to their agents in this country, for sale, and, for more than a year past, they have been and are now continually disposing of them in large quantities at public vendue, at little or no profit, and often at a great sacrifice. We do not enjoy that fair competition with them which we anticipated. American manufacturers must sell their goods at as low rates as foreign manufacturers, or discontinue their operations. They are not protected against this state of things by the duties imposed on foreign goods, for two reasons, viz. the nature of the duty, and the manner in which it is determined. Being an *ad valorem* duty, and both their owners and their agents being foreigners, having but one interest, it is well known that their goods are appraised in the invoices of them, far below their true value even in England. This, and the advantages which the foreign manufacturer has in the price of labour, and cost of the raw material, renders competition on the part of the manufacturers here impossible. In this manner the United States are defrauded of their revenue, and the act, revising the tariff, and which was intended, undoubtedly, to protect our manufacturers, is defeated, and is as unavailing against the foreign manufacturer as if it did not exist.

It cannot be said that foreign manufacturers are unable to sell at less prices than those of this country. We see them do it daily, and they advance their most important interests by doing it. Their course has long been, after supplying other markets, to throw the surplus remaining into the American market; where, if it be sold at cost, they incur no loss; and, whether sold for cost or for less than cost, they secure one object of the utmost importance to them, the depression of American manufactures.

Again, under the laws regulating the duties on wool and woollen cloths, they can afford to sell woollen goods equal in quality to ours, cheaper than we can in our own market. Those laws are a protection to them, but not to us. By the revision of the tariff in 1824, the duties on imported woollen goods was advanced only eight per cent. *ad valorem*, while that on wool was increased fifteen per cent. No wool is exported hence to Europe, but large quantities of it are purchased by our citizens there, and imported into this country. More than one third of the wool manufactured here is obtained from Europe, and manufacturers of the United States have to pay the duty of thirty per cent. on it, while they have the mere nominal protection of thirty-three and a third per cent. *ad valorem* duty on foreign goods, and that duty determined by the party paying it. The records of our custom houses show that more than four-fifths of the woollen goods sent to this country, are imported by and on account of foreigners. This fact alone demonstrates that our manufacturers are not protected by our existing laws, and that something further is required to secure them against the excessive importations of foreign goods. The low rate of wool and labour abroad, and the inefficiency of our tariff, will enable foreigners to persevere in their present

system. Wool is now sold in Europe at fifty per cent. below its price in the United States. Some of your memorialists have recently purchased bills of exchange at 12 per cent. premium, and remitted them to England for the purchase of wool, which will cost them less, delivered at their doors, with all the charges of exchange, freight, duty, &c. than the price of the article here. Merchants in this country have imported large parcels of wool from England the last year, paid the duties and all charges, amounting to 50 per cent. and sold it here at an advance. As to the price of labour in a country like England, it must at all times be much lower than in the United States, and for a long time it has been and now is obtained at the lowest rate, consistent with the support and existence of those who perform the labour. Present appearances do not justify any hope of a speedy change in this respect.

Further, in a large manufacturing country like England, it is not to be expected that the productions of labour will always be measured by the exact extent of the demand. There is always a surplus—and that surplus is sent to the United States. It is removed from their home market, to maintain the price of the residue left there; and its introduction here produces the same effect, which would be caused in England if that surplus were retained there. For a long time the manufacturers in England have manufactured much more than has been required for consumption. The surplus, beyond the amount wanted in their home market, has been sent to this country; and the effect of this has been to maintain or increase the value of the residue of their manufactures, and to reduce the value of all similar articles in the United States. It is obviously for the interest of foreign manufacturers so to dispose of such a surplus: for, though that should be sold at a sacrifice, the loss on that surplus will be more than compensated by the advance of value on the residue—while the effect on all the American manufactures must be precisely as injurious as it would be to the manufactures if that surplus were sold in their home market. It must and does depress the value of American goods, of which a sufficient quantity can be readily manufactured to supply the wants of this people.

It is well known, too, that where there is a surplus of any articles in the market, the price of the whole is not thereby diminished in exact proportion to the amount or extent of that surplus. But the consequence is always to reduce the price or worth of all articles of the description below their true value. The fact that, there is more than is wanted for consumption, discourages all purchasers, and the goods must be kept or sold by the holders of them at a loss. If England sacrifices in the United States only one million of woollen goods per annum at auction, the certain result is that the residue of her goods sells at a greater price, and that all the American goods of the same description, must be sold for less than their value, and at a price regulated by the rate at which the foreign goods are sacrificed.

Nor is it any gain to the people of the United States, that foreign goods are thus sold at cost, or less than their cost. The existence of our manufactures is the cause of this, and their ruin its object. We have shown that the effect is to impoverish the thousands in the United States who are engaged in the different branches of manufactures, by deterring those who would invest their capital in this branch of business, from doing so, and by ruining those who have already embarked in it. These sacrifices of foreign goods will cease to be made when they have produced their effects, and American manufactures shall have ceased to exist.

We do not ask that the duty on imported wool should be increased or diminished. The quantity of it produced in the United States is not equal to

the demand for it, and our manufacturers must obtain it from foreign countries. To increase that duty would be to impose additional burthens on them, who are unable to endure those already existing. We will not ask to have the duty on wool diminished. It is a burthen to us now, but we trust and believe that, ere long, sufficient will be produced in the United States to render it unnecessary for us to purchase it at an advance of fifty per cent. in the market of those who themselves use it, and with whom we believed our government intended we should be able to compete on terms both fair and equal.

Neither do we ask that an increase of the *ad valorem* duty on woollen goods should be imposed, unless on principles, and under regulations, very different from the present, and which shall secure the enforcement of laws, which are now notoriously and continually evaded to the diminution of the national revenue and to the ruin of many of our citizens.

We know of but one resource. It is an entire change in the amount and mode of determining the *ad valorem* duty; or the adoption of a "minimum duty," which will not and cannot be evaded, and which shall be apportioned upon the number of yards or quantity of cloth imported in every instance. Such a measure may protect the manufacturer. It can injure no one. No class of men in this community can prosper without all partaking in their prosperity. The price of goods to the consumers here can never be increased to their injury; competition among our own citizens will prevent it. All experience proves, especially the experience of American manufacturers, that no class of our citizens can long continue in the exclusive enjoyment of any lucrative branch of business. Competition will reduce their gains to a fair and reasonable standard. To that standard we are willing to conform. But we are not willing to see the revenue defrauded, and our own citizens embarrassed or ruined, for the benefit of foreigners, who evade our laws, and make war upon our most important interests.

In most of the large manufactories in New England at least half the machinery is idle. The owners of large factories, who have completed their buildings and purchased machinery, have discontinued their operations, and await with anxiety the determinations of their National Legislature. Those who continue a great portion of their former business, do so under great embarrassments, and without any hope of successful competition, unless some laws are enacted for their relief.

That their interests, and the interests of the country may be thus protected, is the earnest prayer of your memorialists.

Boston, 23d October, 1826.

A NEW ENEMY TO WHEAT AND RYE.

MR. SKINNER, Washington, Dec. 29, 1826.

The Rev. Timothy Dwight, late president of Yale College, in his travels through New England and New York, about the year 1810, states it as the opinion of the farmers of Connecticut, that the "barberry bush" blasts wheat and rye. Vol. 1, p. 344, he says, "its blossoms, which are numerous, and continue a considerable time, emit a pungent effluvia, believed to be acrimonious and to injure effectually both kinds of these grain. Among other accounts, intended to establish the truth of this opinion, I have heard the following. A farmer of Long Island, sowed a particular piece of ground with wheat, every second year, for nearly twenty years. On the southern limit of this field, grew a single barberry bush. The southern winds prevailing at that season in which the bush was in bloom, carried the

and afterwards the decayed blossoms over a breadth of this field for a considerable extent, and whosoever they fell, the wheat was while throughout the remainder of the field

it was sound. In Southborough, a Mr. Johnson sowed with rye a field of new ground. At the south end of the field also grew a single barberry bush. The grain was blasted throughout the whole length of the field in a narrow tract, commencing at the bush, and proceeding directly in the course and to the extent in which the blossoms were diffused by the wind. In another field the property of a Mr. Harrington, an inhabitant of the same township, exactly the same circumstances existed, and the same mischief followed." It appears also, from other facts stated a little farther by the same author, that even esculent roots, planted near a barberry bush in a garden, never came to perfection. Presuming that some of your readers may find some of those insidious foes lurking about their fields and gardens, I have sent you this extract as furnishing a means by which they may be known, like the conqueror, by the devastation they carry with them.

I conclude by recommending their extirpation.

Yours, &c.

R.

LARGE VEGETABLES.

J. S. SKINNER, Esq. Winton, N. C., Dec. 20, 1826.

Dear Sir,—As I have often seen in your very useful paper, the size and weight of the vegetable growth of our country, permit me to state two circumstances that I think worthy of attention. The first, a Radish from my garden, measuring 18½ inches in girth, or circumference, weighing 3 lbs. 11½ oz., seen by a number of gentlemen. The other, as related by A. Cross, Esq., of Gates county, N. C.; who measured a Sweet Potato four feet in length and 15 inches in circumference. The radish was from the seed of the small spring radish, which went to seed the last summer, and was sowed in August or first of September, and pulled on the 6th of December.

Very respectfully, your obed't,

G. M. SMITH.

INTERNAL IMPROVEMENT.

[From the commencement of this journal, one of the avowed and leading objects of the Editor has been to record what is passing, and to promote whatever may be designed, for the cultivation and extension of our *Internal* resources. The large amounts subscribed by the state of Maryland and the United States, in the Chesapeake and Delaware canal, independent of the nature of the work itself, have made it a national work, and the apprehensions which exist, that these amounts have been unprofitably invested, if, indeed, they be not entirely sunk, makes every document important, which sheds light upon the subject: hence it is, that it is incumbent on us to publish the following.]

CHESAPEAKE AND DELAWARE CANAL.

LETTER TO THE SECRETARY OF THE TREASURY.

To the Honorable Richard Rush, Secretary of the Treasury of the United States

The President and Directors of the Chesapeake and Delaware Canal company, very respectfully submit the following brief statement of the progress and present condition of the works; and thus they do with the greater satisfaction, as demonstrating that their labours are at length drawing towards a successful termination.

So much of the wharf work of the Delaware Harbour, as had been directed to be built the present season, is nearly finished; the south pier is not yet filled in, but orders have been given to have it done forthwith. The drudging machine is advantageously employed in excavating the basin. It will shortly be removed through the tide lock into the canal, to be used on the marshes. This harbour will necessarily cost much more than if it had been construct-

ed, as originally intended, with banks of earth, but it will be much more convenient, commodious and secure. It will enclose an area of about seven acres.

The Delaware tide lock is finished. It was found that the stone, which entered into its formation, could not be wrought so as to make a neat joint, though otherwise very suitable; and as the best water cement has been freely used in the construction of this lock, no doubt can be entertained that it is a substantial, durable piece of masonry. A very stiff clay, well puddled outside of the walls, serves to give additional security to the work.

Sect. No. 1, and 2, are nearly finished. A few cart loads of earth are yet to be removed, and some trifling work done to the swivel bridge at Newbold's when this part of the canal will be completed and navigable.

Sect. No. 3. This has been, in some respects, the most interesting, troublesome and expensive section on the whole line; and from the difficulties which have occurred in the course of its execution, has caused much anxiety to the Board. It extends about three miles and a half through the Cranberry and St. George's marshes, from No. 2 to the left lock. The engineer in chief, in a late report, says—"The ground on this section, has generally been as bad as nature ever formed to carry a canal over." As a measure of early precaution, previously indeed to the excavation of a spade of earth, and before the route had been finally settled, borings were directed to be made here and elsewhere, to ascertain the character of the earth; and the Board were led to believe that a stiff clay prevailed through all these marshes, to a considerable depth below what would be required for the bottom of the canal; but as the work went on, and the true nature of the ground was developed, it was seen to be altogether unfit to enter into the construction of the tow path; no alternative therefore remained, but to incur the very heavy expense of conveying solid upland earth from a distance for that purpose.

The sinking of this heavy material has been very great; but in the unvaried opinion of the Engineer in Chief, and other eminently qualified individuals, confirmed by the frequent personal observations and judgment of the members of the board, no other means of forming a safe and durable canal over these marshes could be pursued. The tow path has at length been carried along the entire line of this section and nearly the whole of it has been finished; but at a very heavy expenditure of money, and about five hundred thousand cubic yards of solid earth. The actual contractors were bound to have completed this section in July last; but it is probable they will not finish it before next spring. In a late communication from the engineer in chief, he remarks on the subject of this section, that "much has been said about the line being altered from the original location. I do not think it has been deviated from, at any one point, twenty feet from the plan reported by Mr. Randel. Many persons have asserted, and perhaps believe, that by a different location of this line, by cutting off the hard points of land that put into the marshes, the canal would have been formed cheaper.—After much examination and reflection upon this question of location, I am perfectly satisfied, that the present location is the best; taking into consideration the drainage, the free vent of water for the side power, if ever used, and the least injury to the country, on account of stagnant water, prejudicial to health."

The Lock at St. George's is going on well. The excavation has been accomplished, the piles driven, the floor laid, and about six feet of masonry on both sides finished. It is, however, probable, that from the near approach of winter little more can be done until spring.

Sect. No. 4. This section extends from the lift lock at St. George's, 3 miles westwardly, through the mill pond. The embankment, to Wilson's Point,

is rapidly progressing, and looks well. About one mile and fifty-three chains of the eastern end of this section have been recently re-let, and will probably be finished in May next.

The residue of this section is under contract to other persons, whose contracts are also of very recent dates.

Sect. No. 5. The eastern division of this section, of which, as reported by the engineer in chief, about three hundred thousand cubic yards are yet to be excavated, has likewise quite lately gone into the hands of other contractors, who are proceeding with spirit and good effect. The western division of this section remains in the hands of the persons who originally undertook it, and who are efficient men. They have also about three hundred thousand cubic yards of earth to excavate.

The bridge at the Buck has been for some weeks in use. The covering and painting are finished. It is a neat, substantial structure, built on the best mechanical principles, both useful and ornamental.

Sect. No. 6. There is little more to be done on this section. A few days additional labour will complete it.

The pivot bridge at Turner's is nearly finished, and may be converted into use whenever wanted.

Sect. No. 7. This section is also so forward that it may be easily completed during the winter.

The Western Locks.

The masonry will be completed in a week; the workmen are now employed in coping the walls—the timber and plank for the grates are prepared. These locks present a better appearance than those on the eastern division of the line, the stone being more easily wrought into close joints, and they are equally durable and substantial.

Having formed contracts for the whole line of the canal, and at an early period, the board seemed secure that it would be completed considerably within the estimate made by the board of United States Engineers, and the distinguished engineers who were associated with them in the examination and location of the line of canal; but they were disappointed, and now find, by a report of their Engineer in chief, that the ultimate cost of this work will exceed the estimate more than as much as they had flattered themselves it would fall short of it; and that of course the funds at present provided, will prove insufficient for its completion.

Whether this be owing to the repeated default of contractors; the heavy and unexpected expenditures on the marshes; the expense incurred by the increased dimensions of the locks, the alteration of the harbour, and the additional elevation of the summit bridge, &c. or to other causes; incident, perhaps, to all similar undertakings, and which it may not be in the power of human prudence to foresee or control—it is perhaps of little comparative importance to inquire. Unpleasant and unexpected as the disclosure is to themselves, the Board hasten to apprise the government of the fact.

It is proper further to remark, that while, on the one hand, the Board has been studious to preserve a rigid economy in all their disbursements, so on the other, considering this to be a national work of great and lasting interest, they have felt it their duty to conduct the whole on a scale of liberality, which should combine utility with permanency, and prove a durable monument of the public spirit of the age. Had they done otherwise, they would not have realized the just expectations of the public, nor have deserved the confidence of their constituents.

Signed by order and on behalf of the Board of President and Directors.

THOMAS P. COPE, *Chairman.*

H. D. GILPIN, *Secretary.*

Chesapeake and Delaware Canal Office,
December 6, 1826.

CANAL TOLLS.

The tolls received in 1826, by the Collectors of the Erie, Champlain, Cayuga, and Seneca Canals, in New York, amounted to \$765,062 95
Amount received in 1825, 521,343 94

Increase, . . . \$243,719 01

LADIES' DEPARTMENT.

TULIPS.

(From Maddock's Florist's Directory.)

[Concluded from page 325.]

Hail storms are very injurious to the foliage of tulips, early in the spring; for wherever a hail stone falls or strikes, the part is bruised, the free circulation of the juices and growth of the plant is impeded, the wounded parts lose their verdure, and a disagreeable effect is produced to the eye; therefore, although it is not absolutely necessary to cover the inferior beds of tulips during a common winter, yet it is highly proper to defend them against hail storms in the spring; and likewise to cover them when in bloom, in case of hot or windy weather, which would soon destroy their beauty.

Those who wish to procure new varieties of tulips, should procure the best sorts of breeder tulips, a name they are generally known by; these consist of one plain colour, on a white or yellow bottom; no person should make the attempt who is not possessed of a great fund of patience and perseverance, as the period of procuring finely broken tulips from breeders is very uncertain, so much so that it is not unusual to wait ten or twenty years without the desired success, although it sometimes happens fortunately to take place the first, second, or third year of their blooming; and where the collection of breeders is numerous, there may be reasonable expectations of procuring one or two valuable new flowers annually, but not otherwise; a poor dry soil is most likely to produce these effects; and a single instance has occurred, where forty breeders out of fifty became broken, or variegated, in one season, in a situation of this description.

New sorts of breeders are procured from seed, but such only as have very tall, strong stems, with large well formed cups, clear in the bottom, are worth cultivating.

The seed should be saved from the most perfect breeders, in preference to the finest of the variegated or broken sorts, as the seed of such produces nothing but poor weak breeders, of no value. It should remain growing on the stem till the pericarpium becomes of a brownish colour, and begins to open; it is then sufficiently ripe, and should be cut off, with six or eight inches of the stem, and treated afterwards, in all respects, agreeable to the directions given for the management of hyacinth seed.

* Justice relates a case which he saw practised in Holland, which is calculated to afford considerable encouragement to the breeders of this flower. A gentleman there, he says, being resolved to break some very fine colours of new breeders which he had recently procured, prepared a very lean, sandy, and gravelly soil, and therein he planted the roots eight inches below the surface of the beds. The first spring he broke forty of them extremely well, most of which retained their stripes to their fading, and had entirely thrown off their original colours. The following autumn he planted them in some of his richest garden mould, and most of them retained their colours. The reason he gave for changing the soil the second year, from that wherein he at first planted them, was, that as at first they were planted in a lean, gravelly soil, the magnitude of their roots was so diminished, that he was afraid their flowers would have been small, although they were broke; and therefore he planted them in a rich soil, to enlarge their roots. The experiment succeeded, and the roots recovered nearly to their pristine magnitude.—*Brit. Gard. Direct.* 301.

rections given for the management of hyacinth seed. Some of the seedlings will bloom by the fourth or fifth, and most, if not all, by the seventh year.

Early tulips should be planted a month or six weeks before the late blowers, at rather a less depth, and in a warmer situation; they will then blow in March or April following; their stems are much shorter, and their properties, in general, are much inferior to the late blowers; they consist of roses, bybloemens, and bizards, of which, however, there are many varieties.

A description of the properties of a fine variegated late Tulip.

The stem should be strong, elastic, and erect, and about thirty inches above the surface of the bed.

The flower should be large and composed of six petals: these should proceed a little horizontally at first, and then turn upwards, forming almost a perfect cup, with a round bottom, rather widest at the top.

The three exterior petals should be rather larger than the three interior ones, and broader at their base: all the petals should have perfectly entire edges, free from notch or serrature; the top of each should be broad and well rounded, the ground colour of the flower, at the bottom of the cup, should be clear white, or yellow; and the various rich coloured stripes, which are the principal ornament of a fine tulip, should be regular, bold, and distinct on the margin, and terminate in fine broken points, elegantly feathered or pencilled.

The centre of each leaf, or petal, should contain one or more bold blotches, or stripes, intermixed with small portions of the original or breeder colour, abruptly broken into many irregular obtuse points. Some florists are of the opinion that the central stripes, or blotches, do not contribute to the beauty and elegance of the tulip, unless confined to a narrow stripe, exactly down the centre, and that they should be perfectly free from any remains of the original, or breeder colour: it is certain that such appear very beautiful and delicate, especially when they have a regular narrow feathering at the edge; but the greatest connoisseurs in this flower, unanimously agree, that it denotes superior merit, when the tulip abounds with rich colouring, distributed in a distinct and regular manner throughout the flower, except in the bottom of the cup, which, it cannot be disputed, should be a clear, bright white or yellow, free from stain or tinge, in order to constitute a perfect flower.

LEATHER AND PRUNELLA.

A writer in the *Merrinack Journal*, has opened a battery against the fashion of wearing cloth shoes by the ladies. He says, with great justice:

"If there is one constant practice that deserves execration, this is it. Examine the many cases of consumption and decline now prevalent throughout our country, and it will be found that first of all, the patient, by wearing cloth shoes, got her feet wet, which caused a slight cold—before the first cold was fairly cured, a second one was taken by the same carelessness, and so it continues until a consumption is seated—when, after lingering a few months, death ends the scene. It is a fact which I presume will not be disputed, that twenty females at least are carried out of the world by consumption, where one male is. I believe this cannot be accounted for in any other manner, than that men are not a tenth part so careless of their health as ladies are. You can scarcely name a prudent man who will consent to have his feet wet by thin shoes two or three times every week; on the contrary, many take a method to have their boots water proof. If the ladies think that lasting, or valencia, or satin

A letter from Washington says, "Mrs. DECATUR has again presented her claims to Congress for an allowance to be made to her for the destruction of the frigate *Philadelphia* by her late husband, in the harbour of Tripoli in 1804." ¶ We have seen a pamphlet of 62 pages, containing the documents published by Mrs. Decatur relative to this claim, and think the lady has made out a fair case, and to be justly entitled to the benevolence of a liberal and high minded legislature.

RECIPES.

[Many recipes have been given to the public for curing beef; a most important item in the department of domestic economy—we recommend the following with great confidence, for two reasons:—First, because we have been favoured with it by a lady who cannot be excelled for good taste and good management; and secondly, because we have dined on beef pickled by this process, which was super-excellent.]

RECIPE FOR CURING BEEF.

Prepare your brine in the middle of October, after the following manner:—Get a thirty gallon cask, take out one head, drive in the bung and put some pitch on it to prevent leaking; see that the cask is quite tight and clean. Put into it one pound of salt-petre powdered, fifteen quarts of salt, and fifteen gallons of cold water, stir it frequently until dissolved, throw over the cask a thick cloth to keep out the dust; look at it often and take off the scum; fifteen gallons of cold water will exactly hold, in solution, fifteen quarts of good, clean Liverpool salt, and one pound of salt-petre; this brine will be strong enough to bear up an egg. This brine will cure all the beef which a private family can use in the course of the winter, and requires nothing more to be done to it, except occasionally skimming the dross that rises; it must be kept in a cool, dry place.

For salting your beef—get a molasses hogshead and saw it in two, that the beef may have space to lie on; bore some holes in the bottom of these tubs, and raise them on one side about an inch, that the bloody brine may run off. Rub each piece of your beef very well with good Liverpool salt; a vast deal depends upon rubbing the salt into every part; it is unnecessary to put salt-petre on it; sprinkle a good deal of salt on the bottom of the tub. When the beef is well salted, lay it in the tub, and be sure you put the fleshy side downward; put a great deal of salt on your beef after it is packed in the tub, this protects it from animals. You must let the beef lie in salt ten days; then take it out, brush off the salt and wipe it with a damp cloth; put it in the brine with a bit of board and weight to keep it under. In about ten days it will look red and be fit for use. The best time to salt beef is the latter end of October, if the weather be cool; and from that time have it in succession. When your beef is taken out of the tub, stir the salt about to dry, that it may be ready for the next pieces. Tongues are cured in the same manner.

EDITORIAL CORRESPONDENCE.

Extract of a letter to the Editor.

J. S. SKINNER, Esq. Baton Rouge, Dec. 1, 1826.

"The noble study of Agriculture is but little pursued in Louisiana. Our principal staple (sugar,) is different from that of any other state or section of the Union; which added to the ever-lasting nature of our soil, produces an indifference to the usual modes of ameliorating the condition of the soil, as well as to the best plan of *pitching* and working crops, now in successful operation in many of the states, whose staples consist principally in produce different from our own, and which are so often, ably, and fully

treated of in the columns of the American Farmer. That a very beneficial innovation in our method of raising and preparing cotton (another and very important staple of Louisiana,) for market, might be introduced, cannot, in my opinion, admit of a doubt. To effect which, is the duty of scientific and practical growers of that article.

"Our lands, repay so abundantly the labours of the husbandman, that invention, generated by necessity, is never on the alert to adopt the best mode of culture. This, however, does not impair the fact, that many implements of husbandry, now in use in the Northern, Middle, and Western states, might be introduced here with advantage. Another circumstance that retards the adoption of improvements in agriculture among us, is, that far the greater part of the labour on our plantations is performed by slaves; which exempt us (I mean the lords of the soil,) from great bodily exertion, and prevents our feeling the necessity of improvements on our mode of agriculture.

"I am told that many of our planters, who make annually one hundred bales of cotton, or two or three hundred hogsheads of sugar, do not grow an ear of corn; this strikes me very forcibly, as being a great oversight, particularly when we take into consideration, the great, and sometimes ruinous, fluctuations in the price of the former article.

"It is generally acknowledged to be a fact, that had the price of cotton in Louisiana remained at 15 cents, instead of rising to 25, 30, and even 35 cents, as it did a few years ago, our citizens would have been more out of debt, and consequently, more independent and easy in their circumstances, than they are at this day. I believe too, that had cotton remained steady in its price, the greatest curse that ever the people of any state were saddled with, would never have been thought of. I mean the Mammoth Bank of Louisiana."

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 5, 1826.

¶ There can be but few so devoid of reflection and moral sensibility, as to enter on the cares and pleasures of a new year, without casting a retrospective glance on the past, and endeavouring to anticipate the most prominent incidents of the coming year as connected with their social condition and worldly affairs. In the relation of Editor to our numerous patrons, we are prompted from the heart to wish them, with each return of the season, increasing prosperity and happiness. May their labours be crowned with abundance, and if by that very abundance they are compelled to be satisfied with a less amount of pecuniary remuneration let them reflect, that when the essential wants of nature are satisfied, when plenty presides at our board, and health stands smiling at her side—when, to use the language of our excellent Governor, "we have the gratification of knowing, generally, that we are in the enjoyment of peace with all the world, and of civil and religious liberty, in the fullest extent—with all the powers of government emanating from the people, 'the only legitimate source'—and all the public functionaries amenable to them, for the exercise of their delegated trusts; with an abundance of the necessities and comforts of human life and enjoyment, generally diffused through all ranks of society; and with all the great interests of the country cherished and protected, with an exclusive view to the national prosperity and general welfare"—no rational, no grateful man, should repine: for, with these blessings, what is there left that money can purchase, and which is indispensable to happiness? Without stopping to moralize, the idea is never out of place, that we should learn not to set

our hearts upon what is unattainable or may be dispensed with, and above all, not to consider riches, mere riches, the *great good* of existence—for after all, nothing can be more worthless in the eye of true philosophy, but as they afford the means of gratifying rational wants; and it often happens, that after spending a life time in the over-anxious pursuit of wealth, misfortune snatches it away, ill health renders us unsusceptible of its enjoyment, or death himself tears us from its possession—

"The spider's most attenuated thread
Is cord, is cable to man's tender tie
On earthly bliss! it breaks at every breeze.

¶ The augmented patronage bestowed on our labours during the past year inspires us with a grateful determination to make yet greater efforts to deserve it. The field is yet wide and full of objects that deserve attention and culture. To those of our patrons who have complied punctually with the terms of our journal, which from the necessity of the case, require payment *in advance*, our sincere thanks and best respects are tendered, and will be due to those who have forgotten, but now, on being reminded, remit what is due. To another class, who have paid no regard to the most respectful and earnest notice of their delinquency, and who have yet taken the paper from the post office, we have yet one request to make, which we presume cannot be honourably disregarded, and that is, that they would give us notice what they mean to do, that we may know what it becomes us to do in turn. Suppose, let us ask those gentlemen who still use the paper, we had churlishly withheld it, saying, you have not paid and we cannot trust you—what would they have thought of us? We wish not to offend any; but we cannot buy materials, pay the printer, work for nothing and find ourselves. No, gentlemen,—send us what is due, by mail, at our risk—we will even acknowledge it, not only as a discharge of all old scores, but as a new-years' gift—an earnest of renewed friendship in time to come.

¶ By the lucid and able report of the Secretary of War, the total of the army of the United States in November last amounted to 5,809—and the militia of the United States to 1,103,878. The subject of the militia is accompanied by the Secretary with very important suggestions, to which we shall hereafter more particularly advert, having for a long time entertained the belief that the militia systems, so called, of the different states are productive of no benefit, but, on the contrary, of the most pernicious effects upon the industry, health and morals of those upon whom they operate.

IMPROVEMENT OF DOMESTIC ANIMALS.

Projet de Société d'amélioration des Animaux Domestiques; par M. Sénac, Rédacteur de la section des sciences agricoles au Bulletin Universel. Paris, Mai, 1826.

Prospectus of an Association for the Improvement of Domestic Animals; by Mr. Senac, Editor of the department of agricultural science in the Bulletin Universel. Paris, May, 1826.

We have examined this prospectus with a great deal of pleasure, and we think that it contains many hints which we might profit by in this country. The idea of such an association, by which the labour, capital and space which are now superfluously and unprofitably occupied by the cultivation of grain, might be turned to much advantage in the production of fine animals, is a very good one in the case of France, and, in some degree, in our circumstances also. But we have not reached the condition of that country, where nearly all the various branches of agriculture, except the one in question, have been largely and extensively prosecuted, and have mutually contributed, by excessive ex-

tion and abundance, to destroy each other's value and reward. We still have immense tracts of land to devote to mineral resources, or to cover with the vine and mulberry. France has attained to such perfection and copiousness in the production of silk and wine, that they have become comparatively worthless to her from being so common, and she finds it necessary to turn her industry to some other object. The most obvious, is the raising and improvement of the domestic animals, for which she is now, in a great measure, dependent on her neighbours. It appears from the prospectus of Mr. Senac, that in the years 1822, 1823, 1824, 1825, France imported from abroad animals of that description and their products (such as cheese, wool, horns, hides, &c.) to the amount of 199,534,404 francs, or \$39,906,880. All this, he argues, and argues rightly, might be saved to the nation by a judicious breeding of them at home. In 1825, 23,280 horses were imported, 729 mules, 1414 asses, 13,962 beeves, 23,331 cows, 212,398 hogs, 5830 goats, 28,376 sheep of the finer races, and 170,706 of the common; besides an enormous quantity of wool, goats' hair, hides, hair, horns, fat, butter, cheese, &c. The horses alone are valued at \$1,501,428; the beeves and cows, at \$1,516,632; the sheep and hogs at \$1,428,266; the hides, at \$1,835,267; wool, at \$1,583,139; and cheese, at \$866,566. This is a vast field, which the association proposed by Mr. Senac would have for its object, to open to the industry and skill of France.

There is, however, it cannot be denied, great room for improvement in the quality of all our domestic animals. It is not so much that we do not rear enough, but that the *racess* of all might be improved without additional expense. To this end, a society might be got up in each county in the state. Small premiums would stimulate to great improvements—and if the prize animals of the several counties could be concentrated at Baltimore and at Easton on the respective shores, the self supply of the best horses, and the exportation of them and other animals to other states, would very soon become an important source of revenue to the landholders of Maryland.

TOBACCO.—Little or none of this article, the growth of 1826, has yet come to this market, *except from Ohio*. From that state several crops have been inspected and sold for high prices. One lot of six hogsheds sold yesterday for from 12 to \$13 round, and the whole crop of the same planter, eighteen hogsheds in number, has passed inspection in the finest order, and has averaged nearly, if not quite, \$14 per hundred. The perfection to which the Ohio planters have already attained, in what has been deemed difficult in the culture, and yet more in the process of preparing for market, is a remarkable proof of the superiority to be expected in every case where the actual producer is under the constant influence of self interest and the prospect of immediate personal profit. That influence united with the fertility of the soil, and the extraordinary adaptation of their new lands to tobacco of the finest quality, is raising up a competition to which the planter of the seaboard, slave labour district, will have to yield, notwithstanding his greater facilities of transportation to market; and if this transmontane rivalry be at this time so formidable how much more irresistible when, by means of the Ohio and Chesapeake canal, the only advantage in favour of the slave-holding planter, shall have been removed, and upon how many more articles will that rivalry bear? The Ohio planters who visit our market, aver that whilst they can get \$4 per hundred on their farms, or what is the same thing, clear of expenses in this market, they will regard it as a profitable object for the employment of their labour and capital. The particular crops of which we have spoken were transported from more than fifty miles beyond Wheeling, for \$1.75

per cwt., and it may probably be assumed that the average cost of transportation from the state of Ohio is not now more than \$2.50 or \$25 per 1000 pounds. When the canal shall have been finished, the cost, according to the anticipations of its friends, will not exceed five, perhaps three dollars per bhd. May it not, then, be predicted, that Ohio tobacco, of the *finest quality*, will be brought here, and sold for less than we can make Maryland of the worst? And what must be the effect of this upon the price of Maryland lands? This side of the picture wears truly a gloomy aspect in the eyes of Maryland planters—but are there not countervailing advantages in store for them? And were there not, do they not find in their *public spirit*, and their devotion to the general good, an unfailing *salvo* for any personal sacrifice? It is known, in proof of their patriotism, that the planters of Prince George's, have disputed for nothing but the honour of who should be the first to break ground in this great national work!

PRICES OF STOCKS.

(Reported for the American Farmer, by MERRYMAN & GITTINGS, Stock and Exchange Brokers.)

Baltimore, Jan. 5, 1827.

BANK STOCKS.	par value.	present price.
U. States' Bank Stock, per share, (div. off.)	\$118	
Bank of Maryland, do.	300	227 w
Bank of Baltimore, do. (div. off.)	300	340
Union Bank Maryland, do. do.	75	75
Mechanics' Bank,	9	9 w
Franklin Bank,	20	25.25
Commercial and Farmers' Bank,	20	26
Farmers' and Merchants' Bank,	50	54.25
City Bank, w	15	2.80
Marine Bank,	25	27.25
Farmers' Bank of Maryland, w	50	52.50

CITY STOCKS.

Corporation 6 per cent. redeemable after 1836, (div. off.)	100	110
Do. 5 per cent. redeemable in 1832, (div. off.)	100	101
Penitentiary 5 pr. cent. stock; (none in market.)	100	
Museum, 8 per cent. (no demand.)		
Masonic Hall, 6 per cent.	100	par & int.
Annuities, or Ground Rents,	6 to 10	per cent.

ROAD STOCKS.

Reister's Town, . . (div. off.) f. s.	20	10.25
York, do. f. s.	20	7.25
Frederick, do. f. s.	20	11.75
Washington and Baltimore,	50	31.50
Baltimore Water Company Stock, } per share, (div. off.)	50	93
Union Manuf. Co. Stock, per share,	50	14 w
Gas Stock,	100	110
Texascaltepec Mining Co's, per share,	600	850
Havre de Grace Turnpike 6 per cts.	par & interest	

U. STATES' STOCK.

Six per cent. 1813, (div. off.)	100	1003
—, 1814, do.	100	1014
—, 1815, do.	100	104
Three per cent. do.	100	80
Four and half per cent. do.	100	101
Five per cent. do.	100	107

W., wanted—f s., for sale, by Merryman & Gittings.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.	RETAIL.
		from to	from to
BEEF, Baltimore Prime, bbl.	8 00		
BACON, and Hams,	6 10		9 12
BEES-WAX, Am. yellow	29 30		50
COFFEE, Java,	16 16½		20 22
Havana,	14 17		20
COTTON, Louisiana, &c.	11 14		
Georgia Upland,	10 12		
COTTON YARN, No. 10,	28		
An advance of 1 cent each number to No. 18.			
CANDLES, Mould,	13 16		16 18
Dipt.	11 13		15
CHEESE,	8½ 12		12 15
FEATHERS, Live,	30 32		57
FISH, Herrings, Sus.	2 37½		
Shad, trimmed,	5 50	6 00	
FLAXSEED,	1 00	1 10	
FLOUR, Superfine, city.	4 87½	5 00	
Fine,	4 75		
Susquehanna, superfi.	5 00		5 50 none
GUNPOWDER, Balti.	25 lb	5 00	
GRAIN, Ind. corn, yellow	55		
white	55		
Wheat, Family Flour,	1 05 1 12½		
do. Lawler, & Red, new	90 95		
do. Red, Susque.	95		
Rye,	75		
Barley, Eastern	1 22 1 25		
Do. country.	90 1 00		
Clover Seed, Red	4 50 5 00		5 50
Ruta Baga Seed,	87		1 00
Orchard Grass Seed,	3 50		none
Mangel Wurtzel Seed,	1 25		1 50
Timothy Seed,	4 00		5 00
Oats,	40		50
Beans, White,	1 25 1 50		2 00
HEMP, Russia, clean,	200 210		
Do. Country	120 200		
HOPS, 1st sort, (1826).	18		25
HOGS' LARD,	7 10		12
LEAD, Pig	6½ 6½		
Bar	7½ 8		
LEATHER, Soal, best,	21 23		32
MOLASSES, sugar-house	50 50		62½ 75
Havana, 1st qual.	30 32		37½
NAILS, 6a20d.	6½		9
NAVAL STORES, Tar,	1 50 1 62½		
Pitch,	1 75		
Turpentine, Soft,	1 75		
OIL, Whale, common,	35		40
Spermaceti, winter	80 85		88
PORK Baltimore Mess,	11 00 11 50		
do. Prime,	8 50 9 00		
PLASTER, cargo price,	3 50		
ground,	1 50		
RICE, fresh,	3½ 3½		5
SOAP, Baltimore White,	12 14		18 20
Brown and yellow,	5½ 8		10 12
WHISKEY, 1st proof,	36 38		50
PEACH BRANDY, 4th pr	75 1 00		1 25
APPLE BRANDY, 1st pr	31		50
SUGARS, Havana White,	12 50 13		14 15
do. Brown,	10 00 10 50		
Louisiana,	7 15 9 10 10		11
Loaf,	19 22		20 22
SPICES, Cloves,	70		1 00
Ginger, Ground,	7 12		12 18
Pepper,	15 16		25
SALT, St. Ubes,	43 75		
Liverpool ground	54 75		
SHOT, Balt. all sizes,	8 50		12
WINES, Madeira, L. P.	2 50 3 00		3 50 4
do. Sicily,	1 10 1 15		1 50 2 00
Lisbon,	1 05 1 10		1 50 1 75
Port, first quality,	1 65 1 85		2 50
WOOL, Merino, full b'd	30 35		
do. crossed,	20 22		wash' on
Common, Country,	18 22		back & free
Skinnors' or Pulled,	20 25		from tags.

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AGRICULTURE.

THE FLORIDAS.

[The acquisition of these territories, holds a prominent rank amongst the honourable performance of the State Department, during the administration of the patriotic President, MONROE. All unite in considering them, geographically, as of great value to the Union; and the following sketch will enable us to form a more correct estimate of their intrinsic qualities and worth, as regards their climate, soil and useful productions. The source from which it emanates gives it claim to particular respect and confidence, the author being a gentleman of talents, speaking from much personal observation, as a native of East Florida, and for several years Lieutenant Governor of that province. To new territories, thus acquired, it is of importance to have their producible resources made known without delay, that they may the sooner acquire the population which confers the right to demand and the respect which guarantees a welcome admission to the federal family. In eliciting the facts contained in the following memoir, the delegate from the Floridas has added another to many and yet stronger proofs of his knowledge of and devotion to their interests; and if it be both fair and natural to judge of constituents by their representatives, and that in political as in social and individual intercourse, much depends on *first impressions*, the Floridas have undoubtedly made an auspicious debut upon their entrance into the national family circle. To save a feeble but sincere tribute from the reproach of idle compliment, it would be quite sufficient to instance Mr. White's explanation of their capacities for internal improvement in a manner conducive not only to their own wealth but through channels connected with national interests and defences. There is, however, another view in which all that is connected with the growth and prosperity of the Floridas acquires a moral influence and becomes an object of grateful contemplation; it is there, in a soil congenial to the Frenchman's native vine, and to his own temperament, that a grateful people have located 20,000 acres of their territory, as a memorial of their gratitude to him who left his home, his family, his rank, his fortune, and all that could ensure political and social ascendancy, to stand or fall with our fathers in a gloomy and doubtful contest for independence. In the *state of Florida* the descendants of the illustrious LAFAYETTE shall sit under their own vine and their own fig tree; by them, let us hope, shall her councils be adorned and her shores defended. For the prospects of a soil with which their destinies may be identified, all Americans must feel concerned.]

St. Augustine, Dec. 5, 1826.

COL. JOSEPH M. WHITE,

Dear Sir—Before I could get some particulars ascertained, important to the formation of a map of the inland communication to Cape Florida, I found that our mutual friends, Messrs. Mitchel and Fato, had formed an elegant one, and quite to the purpose. There, then, remains for me but a compliance with the latter parts of your request.

The grand cause of the much importance of this country to the United States, in matters of agriculture, is evidently its climate. That being tropical, and the only piece within their territorial jurisdiction that is so. We know that it does not lie with in the tropics; but being immediately adjacent to that of Cancer, and so powerfully influenced by an extraordinary combination of local causes, it has become, to a large extent, completely tropical. This stands evidenced by many tracks of nature on her soil; and particularly so by the indigenous and luxuriant production of many of the perennial plants peculiar to that class of climate.

The most prominent features of this singular, and to us very important, combination of circumstances, are—first, being surrounded by extensive bodies of salt water; secondly, being a long and narrow tongue of land, situated between two gulfs; thirdly, those gulf streams proximate and parallel to its shores; fourthly, its position inclined towards the east from a meridional line about thirty degrees, by which it splits off a body of the trade winds in their progress from east to west between Florida and Cuba, and casts it on to the lower and even surface of the sea on the right hand; and that surface moving fast to the north, encourage it to the north-west, a diagonal course over Florida.

The first, second, and third of these modify our latitudinal cold of winter; the fourth, our climatical heat of summer; with an assurance of cool nights, one of the indispensables to wholesome nature in both animals and vegetables. These place us in a singular state of mediocrity; the most equally removed from the extremes of temperature to be found, perhaps, in any country; producing, at the same time, a salinous, clear, and elastic atmosphere, surrounding us with health; and with an extraordinary collection in species and varieties of vegetables; and congregate in our woods and waters abundance of very many species and varieties of game particularly fish.

Our great desideratum over all the parts of the union, in matters of agriculture, is this modified climate; which will yield certain high priced articles, from exotic plants, that no other part thereof can produce, or not so well; the value of which have ever been flowing from the United States to foreign countries. Among these stand prominent the articles of sugar coffee, and Spanish segars; and many others from south and east that my present limits will not permit me to take up; comprising a considerable amount of outgoings, and commercial dependence.

Sugar has been very profitably made in the southern parts of Louisiana and Georgia; but experience has shown that it will not hold long in granulated or crystalized forms; it runs back into the fluid. Consequently it will not do for exportation, refining, confectionary, nor to keep for home use, as it must shortly ferment after returning back to syrup. And the cause is, that in those states their summer is not long enough to ripen the cane sufficiently. This advantage we have in Florida by being farther south in latitude, and still farther south in climate than what our latitude speaks for:—a consequence of the combination of the local causes I have above mentioned. The cane seeds in Florida, which is not the case in Louisiana nor Georgia. They can make good molasses; which is better than planting cotton; but the only sugar country within the pale of this Union is Florida. Another advantage we have, for which only in this singular mediocrity of climate can be found a cause, is that our cane can lay two and even three months after being cut down, and then be ground for sugar. This would not be believed in Jamaica, for there it cannot lay above ten or twelve days, when it must be turned over to molasses, or the distillery, as no longer capable of granulation, from the acidity it has contracted. This is an advantage of vast importance to the cultivator.

I could consent that grain, sea island cotton, &c., should be planted, and live stocks raised, in all West Florida, and that part of East Florida lying north of a line drawn from St. Augustine to Vacasasa bay; the course marked out by nature for our grand canal; comprising a gross extent of about thirteen millions of acres; and even that stocks of cattle be raised in the interior parts of the whole peninsula of East Florida; but along the two seaboards, south of that line, it would be a prodigality of the bounties of Providence to put any of those articles into our soil. Our lands there of all denominations produce

the cane well, high hammac, low-hammac, fresh-marsh, swamp, savannah, pine lands, what we call "pine barrens," all produce it to great profit. No plant will grow so generally well, if but the climate suits, as the cane: a native of low, fresh, rich lands, it readily accommodates itself to poor, high, and brackish situations. This, at any rate, is the case in the more southern parts of Florida.

Coffee is another article of great importance to the United States; and undoubtedly not to be produced, even partially, in any other part of them. I am aware that but few persons, even of those who live in Florida, will subscribe with me in this opinion. I am, likewise, aware of their prejudices in forming opinions on what they never examined, indeed, what they never saw nor thought of. That they take into view only the latitudinal character of the part of the country I have called the coffee region; making no allowances for the modifications I have mentioned; modifications that surround them even here at St. Augustine with blessings unheeded and unappreciated, because never wanting, without which they could not live here at all. For instance, was it not for the incination of this peninsula, about thirty degrees to the east of a meridional line, the trade winds would pass across it, not farther north than about Cape Florida, and leave the rest a wretched country for animals and vegetables. Let them go and look at that part between the mouth of Indian river and Cape Sable, a distance of about one hundred and seventy miles north and south; where so many of the perennial plants of Cuba flourish, that are as much averse to the cold as coffee.

I do not mean that cold never invades that country; but I hold that it does not arrive there at a period, or intensity, sufficient to kill this plant. The coffee, like all other deciduous plants, is in a state of torpor in the winter, during which time a considerable degree of cold cannot injure them; and when the spring has awakened them from their winter sleep, no cold can occur there that would be fatal. Nature has invariably, we see, selected the greater portion of her plants for northern climates from the deciduous classes; reserving the evergreens in greater numbers for the southern. Many of the former, that stand the severest frosts of winter, would be killed by a moderate one did it happen in spring.

Moreover, in Cuba, where they have a choice of temperatures, that being a mountainous country, they prefer planting their coffee on elevated grounds; considering the plains too hot. There they ascend hills to seek such temperature as we have on our plains in Florida. It was once a matter of query here, whether rice would grow as far north as this. Indigo, for a time, suffered in the same way. Cotton was more favourably received; that might do here, but not in Georgia. Our sweet orange, an indigenous tree farther south, is an exotic here; and one that never becomes naturalized, for they go to ruin and die when abandoned; and with all our care they are often severely nipped, and even killed, by frost at St. Augustine.

Was the sweet orange a deciduous plant, like the coffee, it would never be hurt by cold at St. Augustine; because this class of plants do not vegetate during the period in which they are bare of leaves; but the evergreens are growing, more or less, throughout the winter. We see plainly, that our severest frosts, when preceded by a considerable spell of cold weather, do them no injury; but a sudden frost, after a warm spell that has occasioned them to put out young shoots, bites them most wickedly. The nutritive fluids of deciduous plants are, evidently, absent or paralyzed during the winter season; while those of the evergreens are always present in a state of action. It may even be said, that the former are in a state of torpid insensibility, not asleep, to exist so long without lungs—their leaves.

Yet to us the sweet orange is a most valuable tree; no other, not even the spice trees of the east, produce in the east itself so valuable an annual income per tree. These, no doubt, met, for a long time, as few friends as the coffee. I say, let the sceptical peruse the region I cite; and if they are open to conviction, I trust they will become proselytes, though they may not be inquirers into the characters of plants.

The next objection is, that there is no land in that quarter for its cultivation, because Mr. Vignoles' map dashes off millions of acres with *extensive inundated regions*; and a gentleman of Georgia has published, that *all Florida is a sand bank rolled up by the sea like Cape Cod*. Mr. Vignoles merits much applause for his map; unquestionably it is the best we have had, particularly of the internal parts of the country. Nothing in the affairs of man is to be expected perfect at once. Why, in a part of Scotland, now famed for arts and literature, it was the practice to bring water from the spring in a bucket carried in one hand, until an ingenious person contrived a yoke across the shoulders with a bucket suspended from one end, and a stone from the other. This was certainly an improvement, as it admitted of an erect position of the body, consequently less fatiguing. In process of time, another genius substituted another bucket for the stone; and so on, all our affairs have progressed. This gentleman necessarily wrote much from lame information; and of that part of Florida, he was an hundred times more likely to get information from those who knew *nothing* about it, than from one who knew *any thing* of it. There, as in all other parts of the country, are to be found some of our several denominations of land. Probably not so much of live-oak-hammocks as of fresh marsh and savannah; and, in most instances, much easier to clear the two latter of water than the former of timber and roots, besides affording a soil much more valuable; and there is always time enough to do this while the coffee nurseries are growing to a size for transplanting.

No pains ought to be spared in raising an article so desirable for home consumption and trade as coffee; so safe from agricultural dangers that assail wheat, rice, cotton, tobacco, &c.; so neat, light, convenient, and cheap in culture, every single-handed and large planter can progress to an estate on the same ratio; and so lucrative. We have the climate, bless our stars, and we can make the soil what is necessary; whereas, without the climate, the best of soil, seed, seasons, culture, and care, would be altogether unavailing. I firmly believe that we can raise the coffee in that part of Florida on as good terms as they do in Cuba, and better, when we take into account the duty on importation. It is well known that we always exceed them in the quality of their native orange; and, indeed, the preference has been given to our oranges in London over those of Lisbon, although, as I have said, an unnaturalized exotic, ever under the hammer of our winter.

Spanish segars is an article of great and expensive consumption in the United States, and over Europe. We now raise and manufacture here, as far north as St. Augustine, as good, not as those that are imported from Cuba for sale, they are generally of a second class, but as good as they keep there for the rich amateurs. Here, then, is a very considerable source of wealth.

This singular and very valuable mediocrity of climate, and geographical situation of country, cannot fail to make Florida valuable to the United States, and conspicuous to the world as an agricultural country, independent of its salubrious, commercial, and highly political traits of character. No fostering cares or expenses towards bringing speedily into operation its many resources, can be carried too fast or too far. It stands as a midway dispenser to the two immense continents of this

hemisphere, of many of those articles for which each is dependent on the other, and both dependent on the other hemisphere. The United States have not within their pale another tract of so much general value to the whole Union. Agriculture, commerce, national policy, that navy with which they are to compete with Great Britain and look down on other nations, all join in loud calls on the general government in behalf of Florida.

Another very great reason why the U. States should not be parsimonious, nor tardy, in aids to Florida, is the bringing into market, for the benefit of no less portion of her cares than her navy and her commerce, another set of articles of native produce, and of great extent and value. These are its live oak, yellow pine, cedar and cypress, and many other kinds of timber. But particularly these four have met the admiration of the English, and all other markets where they have been seen, as superior in quality to the same denominations of timber brought from all other countries; and especially the yellow pine for ship planking. I have seen the yellow pine of central Florida bought in Savannah, Georgia, for this purpose at 50 per cent. more price than her own. These extraordinary good qualities have grown out of this same singular and influential mediocrity of climate. The same kinds of timber are to be found somewhat to the north and south of this country; but in quantity, size, and quality, Florida is certainly their home.

The several small canals contemplated in opening an inland navigation along our Atlantic shore, from Fernandina to Cape Florida, three hundred and seventy miles distance; and indeed from Cape Florida to Charleston, amount, by Mr. Mitchell's map, to but thirteen and a third miles. This will lay open one hundred and forty miles of the one hundred and seventy Atlantic front of our coffee region, from Cape Sable to the mouth of Indian river; and the whole Atlantic front, one hundred and seventy miles, of our sugar region; from the mouth of Indian river to St. Augustine; and the whole of our cotton and grain region, of sixty miles front, from St. Augustine to St. Mary's river. I have particularly called that middle space our sugar region, though it is all a sugar country to Cape Sable; but coffee requiring a still more southern tract than cane, because of its perennial high growth, I have assigned to it the southern moiety of that extent.

The coffee region contains in gross about nine and a quarter millions of acres; comprehending all the country south of a latitudinal line drawn across the peninsula from the mouth of Indian river. This space, with small exceptions granted to individuals, not exceeding the fractions over nine millions, is all United States' property. Deduct then, if you will, two millions for waters, beaches, &c., a large allowance—there remains seven millions of marketable acres. Coffee, or at least cane, will grow to advantage on a very large portion of it; and nearly the whole is susceptible of being made very profitably productive of the cane, if not of both cane and coffee. The climate is there, and some soil to begin upon in all parts; no rocks nor mountains encross the surface. But admitting that we divide the breadth of the peninsula, which in its widest part is one hundred and forty four miles, into six parts; leaving one sixth on each seaboard as an agricultural country, so that the haulage should never exceed fourteen miles, which in Georgia and the Carolinas would be considered but a trifle, and convert the middle four sixths into a grazing and "rooting" district; and a good country and climate it is for this purpose, and near to Cuba, an endless market for our live stock. Here, at once, is a great property of the United States, to be improved by a trifling part of a comparatively trifling canal. And this, you will recollect, is altogether independent of its primitive growth; its stores of live oak, pine, cedar, and cypress.

The sugar region, from the line at the mouth of Indian river to that of our intended grand canal, contains, in gross amount, about eleven and three fourths millions of acres. Here the individual claims amount to more than all other parts of Florida put together. But even here they are scattered, and, with but few exceptions, narrowly filed along the shores of water-courses, leaving valuable lands in their rear: for we more southern Floridians never thought of hauling a mile to a landing. To have the river at the door, superseded, in our opinions, all other advantages of soil and situations. And in this section, a larger portion is occupied by water that, in the main, makes the country more valuable. But even under these circumstances the amount of the government lands is very large; I suppose about eight millions of acres. Generally they are of better quality in points of soil and pasturage than the coffee region, and particularly so in the inland parts. But the coffee region has the advantage in that which most enhances the value of all, climate. Here again is an extensive property of government, as well as individuals, to be greatly improved by a trifling amount of canalling. Some of the finest lands in Florida will be drained by it, and otherwise made approachable; and then they may be emphatically called the most valuable lands in the United States, probably in the universe. They lay in a tropical climate of singular traits of character—that of our cane laying from two to three months cut, uninjured, is a very important one; they are midway in position and climate between North and South America; they are on the maritime frontier of an enterprising, full-coffered republic; they are richly clothed with our quality of oak, and our quality of pine; enough to build navies; and these, with the still more valuable and more lasting artificial products of its soil, sugar, coffee, Spanish tobacco, &c., not flour, corn, cotton, &c., are at a shipping market, no hundreds and thousands of miles to haul or boat to one; naturally comfortable and salubrious, throughout. I repeat, that probably this globe does not produce an equal body of wild lands to compete with Florida in value.

The cotton and grain region, from the line of our grand canal to St. Mary's river, including West Florida, contain in gross about thirteen millions of acres. Allowing for water courses, beaches, and Spanish grants, there remains to the government about nine millions of acres. In this section the soil is generally of a lighter quality than those more southern; very productive when aided by rest or manure, but not so durable under the barbarian mode of culture hitherto general in this country, as well as in the southern Atlantic states. A large portion of it can be deservedly called good land, and but a small one good for nothing. Nearly the whole is a good stock range, and affords fine timber.

Now let us make a total of these amounts, after a reasonable allowance for beaches, water-courses, salt marshes, and Spanish grants, in order to see what remains nett to the general government.

Coffee region,	9 1/4 millions gross—about 7 nett
Sugar do.	11 1/2 do. do. 8 do.
Coffee & grain, 13 do. do.	9 do.
	84 24

We find, then, that the general government owns about twenty-four millions of acres of marketable lands in this territory. As to inundated regions, we have none such. We have swamp and savannah lands, salt and fresh marshes, which are only periodically or accidentally under water; and none of these in such bodies as to be called regions. None that cannot be drained, for they are above the level of our rivers, and these above the level of the sea. Their bottoms are firm lands, soft, when wet, to the extent of their fine mould, a mass of animal and ve-

getable recrement; and when drained like the rice fields of Carolina, will pay the work bountifully; with this difference, that there it is paid in rice; south in Florida, in crops of more value. Our country being nearly flat, it necessarily occurs that heavy showers must take some time to get away from the surface. A traveller, at certain seasons, riding across a large tract covered with water, from a few inches to a few feet deep, may suppose at first view an inundated country; but if accompanied by observation and judgment, he would soon perceive a variety of vegetables projecting above, growing in rich luxuriance, such as never grew on inundated lands; and, that the last sheet of water that occupied the surface must have soon made its exit by currents, filtration and evaporation; and so will this, or such plants could not grow there. We are strangers to such freshets as do great mischief in neighbouring countries.

At a reasonable calculation, the United States own in this territory about twenty-four millions of acres. A territory, a great part of the "pine barrens" of which are destined, at no distant day, to be worth more to their owners than the first lands of Alabama, Georgia, or the Carolinas, acre to acre. And very many of them would have been so at this period, had that enthusiasm which anticipated the change of governments, not been smothered by mismanagement and neglect. A mere fear of being cheated by the old inhabitants, out of a few fractions of these twenty-four millions of acres, has cost the government some thousands of dollars, lost to the people some millions, and kept such a country crippled down for more than five years.

But to this, so far, there is some extenuation. The general government had no knowledge, nor any reason to conceive, the value of the jewel it had acquired, farther than some of its immediate political bearings. It sought the sovereignty of it for years, with avidity, in order to keep off a strong, politic, and ambitious neighbour. It was evident that a rival power, who held Spain in leading strings, could turn it when she pleased into a Gibraltar on the Mississippi. And even then the government did not know that that rival could be defeated by a ship canal across the peninsula, did she contemplate a transfer of her Gibraltar to Cuba for that purpose, much less could it be acquainted with its agricultural character. The American people supposed it a mere waste, something like Salisbury plains or, perhaps, those of Zahara; for the Carolinas, until the price of cotton grew out of the revolutions kicked up by Napoleon, were considered as no great things, and Georgia less. This might have led to the inference that Florida was intrinsically good for nothing; and, indeed, a very respectable gentleman of southern Georgia, who, as he says himself, came into this country to see it, who was neither short sighted nor in dotage, compares it to Cape Cod, a sea shore sand bank eight hundred miles to the north of us. A gentleman of Florida, too, might have alarmed the government by his writings, as it respects their interest in these lands. I have not heard that he ever set any river on fire; nor do I presume that he ever will.

Furthermore: it was conjectured at Washington, that the good lands, had there been any, were all granted away to individuals. It is sad that Mr. Monroe, our late worthy President, replied to an observation of this kind: The United States get a great bargain, if they get but the sovereignty of Florida for five millions of dollars. An evidence of his wisdom. Yea, they had better pay fifty millions for it, than let Great Britain fortify a spot of it in earnest: it would cost more wealth alone than this to dislodge them. And, that England gave up her object here only for another clove by, I have ever believed, and do still.

Florida's former owners, the British and Spaniards, did not know its tropical character. But to

them, both holding so much territory within the tropics, this was not a first rate consideration. Nor did they fully conceive, nor conceiving what they did, appreciate its geographical relation to international policy, nor its internal value to maritime purposes. But when Britain parted with it, a surrounding confluence of disasters had, to her, sullied and jeopardized its value. And when she allowed it to pass from the hands of her ward, she conceived its importance, not contemplating such canals as this of Florida, nor that of Guatemala, and Cuba at hand, a lien too small for her claim of above an hundred millions of dollars. Spain left it with reluctance; but the length and variety of her misfortunes, and the wretched conduct of her king, left her without a choice.

It is now the property of the United States; the people above all others to whom it is of most importance; and to whom it is to become as collaterally valuable as any other state in the Union, Louisiana and New York, probably, not excepted. It certainly behoves them not to be prodigal in time, nor parsimonious in means; in no part of the Union can these be employed so much to the general good. To encourage a rapid and large emigration, is the shortest, cheapest, and most efficient course. No matter from whence they come, it is to the most lucrative and healthy climate, to the most valuable and exposed frontier they go. Nor no matter of whom composed: we have "ast fishing and wrecking, as well as planting grounds; all will find employment, and soon feed, clothe, protect, regulate, and rectify themselves. Nature has liberally done her part, aye, more than her part, by our country; it now lays with our rulers to do theirs. One hundred thousand upland cotton workers, not slaves, are now sinking fast to ruin in the neighbouring states. The day of cotton, in this country, is over with so many; at least it is down to twilight. Where can they go to that it is not a repetition of the same articles with which the markets are overstocked? Florida alone holds out others; and others so much wanted by the world at large, that was her whole gross amount of country all good land, there would not be enough of it. But mankind in general, how much more so this republican people, prefer lean freedom to fat slavery. They frequently move into a wilderness to avoid political oppression and legal tyranny, but never to meet them. What would they do here? Bow to an administration that frowns them off; that frowns these out? Settle in a country that has grown into a wilderness of woods and litigations; without a circulating medium; without avenues of transportation? Without lands for their money? Government has none in market, but in the most inferior parts of the country and climate; those of the old inhabitants are all, every acre of them, locked up, and have been so for above five years. When the laws do not suit the people at home, those from abroad will not come to suit the lawmakers. The first point of wisdom in an infant country, is indulgence; the second, is indulgence and aid; the third, is indulgence and promotion. The child must be cradled, not scourged into manhood.

Respectfully, yours sincerely,

GEO. I. F. CLARKE.

CULTIVATION OF THE SUGAR CANE IN FLORIDA.

Sir,

Washington, Jan. 2, 1827.

You will find a short article, in the enclosed paper, on the culture and product of the sugar cane, which may not be uninteresting to some of your readers.

The capabilities of Florida for planting, and the inducements it offers for agricultural enterprise, seem not be understood or appreciated. I shall occasionally send you extracts, or copies of the

communications of intelligent writers on the subject; which, if you deem worthy of a place in your useful journal, will be acknowledged by

Your obed't serv't,

J. S. SKINNER, Esq.

JOS. M. WHITE.

The annexed observations upon the culture of the cane, have been made by a French gentleman of considerable planting experience in the West Indies and in Florida, and they embrace some interesting particulars. If he can be charged with any error, we think it is in underrating the advantages, and overrating the disadvantages, attending the cultivation of sugar in Florida: for instance, he estimates the common produce of an acre to be 1200 lbs.; whereas at Tomoka, we are credibly informed, that four hogsheds are expected. We think it probable that the real produce will be between these estimates—but the fact will soon be ascertained. Another advantage which seems to be overlooked, is that which we have over the West India planter, in the duty on the importation of this article; and the comparative cheapness and facility with which we can erect our buildings and apparatus. We hope soon to present a detailed statement of the actual expenses of these to the public. Another advantage, which our observer complains of as a nuisance, is this, that the pressed cane, or bagasse, may be applied as a manure.

The disadvantages of which he speaks as resulting from storms in the fall, and from frost in the winter, are certainly of very partial and rare occurrence, more especially to the south of St. Augustine; and the inexperience of those who have hitherto been engaged in the culture, although it has retarded the interest of the parties concerned, yet it is an evil which is gradually correcting itself, and must give way to the enterprise of our planters. Our intelligent observer, we trust, will excuse these remarks, and we thank him for the opportunity he has afforded us of laying his observations before the public, on a culture of such great and increasing interest.

[Florida paper.

CULTURE OF SUGAR CANE AND ITS PRODUCT.

An acre of good land cultivated in cane, with the requisite care, ought to yield commonly 1200 lbs. of sugar, at \$8,	\$96 00
It yields also, in addition, a barrel and one-fifth of syrup.	18 00
	<hr/> \$114 00

A negro, besides attending to provisions and forage, ought to cultivate 3 acres of cane, at \$114,	342 00
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Forty negroes, according to the same proportion, ought to cultivate 120 acres which at the rate of \$342 per head, would be	\$13,680 00
From this production we must deduct a fourth for expenses and wear and tear,	3,420 00

Leaves a nett annual produce of	<hr/> \$10,680 00
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I assume in these calculations the houses to be already established; for the formation of a property of this kind leads to great expense; the workmanship, however, if well attended to, does not require renovation in mass, but often nevertheless may be estimated at about \$30,000.

Connected with this calculation, it would be necessary to have good land, and a resident overseer who has been used to the cultivation and is a good economist; for such an overseer would commonly produce more with 25 negroes, and with ordinary land, than another with 50 vigorous negroes and the best soil. This difference, which is observed every where between the result of good and bad

management, is much more sensible and considerable here than elsewhere, in the nature of the culture, the nature of the negroes, who cannot be lost sight of for a moment, without the work being stopped, retarded or badly done; and finally in the imperious disposition of the soil and climate.

Allowance being made for different obstacles which are encountered in the course of the grinding seasons, which commence at the end of October, and ought to last till the end of February, one may count upon more than 45 days of grinding season, in which the quantity of 3000 lbs. in twenty four hours, which is what can be realised, with the proportional molasses, &c.—250,000 lbs of sugar.

It must not be forgotten that besides the land necessary for cultivating the sugar, there must be added that which is necessary for provisions and forage; for at the time of the grinding season, the animals must be fed chiefly at the hand; and one may calculate here as nothing, the assistance from the pressed cane, for it decomposes and putrifies in a little time, owing to the watery particles which it still contains, and which the cold and frequently humid climate hinders from disengaging freely, and which, on the contrary, is only an embarrassment, the more so as the planter is obliged to make it in heaps at a distance from his buildings. One must also add to the work already mentioned, the necessary firewood, which cannot be fixed at less than three hundred cords for a grinding season of 100,000 lbs. of sugar. This wood must be placed, cut and piled, near the furnace, to be conveniently employed for fuel.

During the six months from the beginning of October to the end of March, the sugar planter is commanded by his work, which presses on him with force and rapidity; so much that the crop of provisions and forage, the different operations which the grinding season imperiously prescribes, the preparation of the land which occasions the different cultures at convenient seasons. The other six months he commands for other work; such as repairing in closures, digging and repairing drains, and weeding, which demand great attention.

The nature of the soil and climate does not admit of cultivating the cane after it is three years old, and to pass from this to a further ratoon, of which the product itself is very indifferent; it might be nevertheless advantageous, if there were sufficient chaff, to manure the half of the culture.

Sugar cane may be planted in January, February, or even March, it vegetates and rises from the ground at the beginning of spring, languishes in May and June during the dry season, begins to be vigorous in July, and in the space of three months only, favoured by rain and heat, it rises, thickens, and at the end of October is in condition to be cut and ground with advantage. The precaution is necessary of pulling down the cane and placing it in covert rows before the severe frosts. This culture offers certainly great advantages, but which are not without their inconveniences.

The first of these are storms or gales of wind in September and part of October, for at that epoch the cane receives their assaults before it has acquired its entire maturity, and thus thrown down it deteriorates promptly by the vegetation which it has not entirely lost, by the humidity of the soil on which it lies, and by the confusion and deficiency of air which makes them stagnate, and in this condition they can give only a middling quantity of bitter syrup.

The second inconvenience is the influence of winter, which although generally very temperate, is nevertheless intermixed with days, and above all with nights very cold, accompanied with frost, which makes it necessary to make the sugar in the time of somewhat over four months, in the only time when it is possible to take advantage of the cane, and the most vigorous of the year, and the least fa-

vourable to the labour of culture, as well from the shortness of the day, as from intemperance of the season.

The third inconvenience is the defective supply of manure which this country affords; and finally the inexperience of those who are now superintending a culture which presents many obstacles from the necessity of the operations and the novelty of the labour.

ON SALT AS A MANURE.

Copy of a letter from Judge Peters to Elkanah Watson, Esq.—Communicated for publication in the American Farmer.

DEAR SIR,

Belmont, Aug. 21, 1819.

In answer to your letter; I have no other reply, than that of reassuring you of my readiness at all times to serve you in the good cause you take so much interest in. It is high time that some younger champion should substitute himself, and suffer you to be at rest.

I desired Mr. Carey to send you a copy of the *Salt* pamphlet; and I have no doubt but that he will do it. I was desirous you should receive it; because you will find in it the means of renovating the lands of your friends at Plymouth, or any other places on the sea coasts. But they must make themselves masters of the subject, by experiments on quantities of sea sand, or salt applicable to their lands *per acre*. In New Jersey, on some parts of the coast, the farmers are in the habit of freely applying sea sand to the most barren and unpromising sandy soils, with great effect, yet with little judgment or care. If some principles and attentive regard to circumstances, both as to times of application, quantity applied, and mode of preparation, were established, how much more would be made of this powerful auxiliary to their husbandry? *Sand* applied to *sand*, is contrary to all the common principles we have known hitherto. But the *salt* is the magical power, and not the mixture of soils. *Sand* with *loam*, or (better) *clay*, we know to be highly efficacious. The salt of the sea sand alone must be the cause of fertility, when sand is applied to sand. You ask me what I yet think of *plaster* on sea coasts, or on salted grounds? with sedge, sea weed, and other salt products of the shores, or marshes, on coasts? My answer is, that I should prefer the salt sand, salt, or salt grass, &c., without the plaster. I am certain that the great balance of facts has heretofore been unfavourable to grounds plastered on sea coasts, or with salted manures. But there are instances wherein success has attended a contrary opinion and practice; some will be found in the Massachusetts Agricultural Repository. So that your friends had better make trials with plaster, and judge for themselves. As to their sea sand—it should be ploughed in, to prevent evaporation, unless it be used as a top dressing. In the former use, more may be used than in the latter. But the Jersey people are little nice about quantity. They, however, sometimes overdose their fields. They find it best ploughed in the autumn.

Set your Plymouth friends to burning clay. I will give to any one you shall direct, our 4th volume, in which every necessary information is given, respecting clay burning. A Mr. Newbold, near Bristol, in Pennsylvania, is burning clay to great account.

You are an itinerant missionary, and gathering your own congregations; you have *hearers*. I have been, for some fifty years, a stationary preacher, and until lately have delivered discourses to empty benches. *Magna est veritas et prevalebit*. I am rejoiced at the present agricultural zeal. What a garden would our country have been, had one half the spirit now exhibited, shown itself half a century ago.

Yours, very truly,

RICHARD PETERS.

(From a New York paper.)

ON MIXING TAN WITH MANURE.

I cultivate a large farm; and have long been in the habit of purchasing manure from those who collect it for sale; of late I have become quite discouraged, the manure which I have purchased has, I think, rather injured than benefitted my land. Not knowing the cause, I at length visited the depositories of the manure, where I found large quantities collected for sale, and saw large heaps of the tan which the morocco leather dressers use in their business, laid to ferment until it turns black like old well rotted manure; and I saw men employed mixing this sour substance among the good manure. This fixed my opinion at once, and I am fully convinced that the failure of my crops was owing to this spurious stuff, which no doubt destroys all the fructifying qualities of manures. On inquiry, I learnt that the manure carts get pay from the morocco leather dressers for carting away their tan, but those good honest fellows do not quite give it away to us poor countrymen, we are obliged to pay high for the cheat—and the cheat is not easily discovered. This is a growing evil; for as the business of the morocco leather dressers increases, so the quantity of tan increases, and so in proportion the produce of the farmer must decrease. This is to warn my brother farmers of the evil.

A LONG ISLAND FARMER.

RURAL ECONOMY.

FATTENING SWINE.

The corn given to your swine should be soaked, boiled, or ground into meal. It is an advantage to let the food for swine ferment a little, but not become very sour, before they are fed with it. Dough made of meal and water, mixed with boiled potatoes, is excellent for swine. Their lodgings should be dry, warm, and kept clean. To prevent measles and other disorders, and increase their appetites, a little brimstone, now and then, given in their dough, is useful. Change of food is advisable in every stage of their existence. They should receive their meals with regularity. They should always have as much food as they will eat up clean; but never more than that quantity. If the issues in their fore legs should be stopped, they should be rubbed open with a cob.

[N. E. Farmer.]

ON DRESSING POTATOES.

Where these useful roots are boiled for the purpose of feeding swine, or other animals, they should be put into bags, or sacks, leaving room for them to swell; and when sufficiently boiled, the sacks should be taken out and left to drain, for the water becomes so strongly impregnated by the poisonous properties of the roots, as to be highly detrimental to animals in general. This will account for the disappointment of those who feed pigs with potatoes mashed with the water in which they have been boiled. When prepared agreeably to the above direction, potatoes become a most beneficial food for pigs, but they are by far less nutritious in the raw state, for the poisonous quality not being drawn out by boiling, it counteracts the benefits of the farinaceous qualities of the root.

ECONOMY IN FIRE WOOD.

The size into which wood should be split, so as to be durable in burning, and yet give sufficient heat, is a matter worthy of some consideration. If split very small, any given quantity will give more heat for a while, but will be quickly consumed; if large, it will consume slowly, but will burn less readily, and give much less heat. A fire composed of billets of wood not more than fourteen inches long,

will give more than two-thirds as much heat as that made of wood double that length. Perhaps billets of from three to four inches, of a medium diameter, will be found the most economical, as avoiding the two extremes.

INTERNAL IMPROVEMENT.

MEMORIAL.

Extract from a memorial of inhabitants of the counties of Ontario, Seneca, Wayne, Yates, Tompkins, Tioga and Steuben, in the state of New York, to the Congress of the United States.

Your memorialists conceive that the Susquehanna river is susceptible of being so improved, and that its improvement will soon be so effected as to answer valuable purposes as a medium of communication. Its navigable branch, the Chemung or Tioga river, in this state, approaches to within eighteen miles of the Seneca lake, a fine sheet of water, never closed by ice, stretching north, nearly forty miles to the great mail route from Albany to Buffalo, and having a good artificial navigable communication with the Erie canal, which latter reaches within ten miles of the southernmost navigable waters of lake Ontario, at Sudus bay, being the best harbour on the lake. A canal will soon be opened from the Tioga river to the Seneca lake, and from the Erie canal to lake Ontario.

The Seneca lake lies nearly or quite due north from Washington city; the distance by passable roads, through Baltimore, Harrisburg, Northumberland, &c. being two hundred and eighty miles; whereas by the routes usually travelled, through Philadelphia, New York, Albany, &c. the distance is about six hundred and twenty miles—being more than double the necessary distance, or three hundred and forty added to two hundred and eighty miles of travel and transportation in passing between those places. It is understood that the route of a national road was surveyed the last season from Washington city to Buffalo, passing through Williamsport, in Pennsylvania, from which place to the head of Seneca lake, the distance is about eighty miles; and from the latter place to Sudus bay, the distance is sixty five miles.

Your memorialists, therefore, respectfully pray your honourable body to pass a law authorising the survey of a road from Washington city via Baltimore, in Maryland—York, Harrisburg and Northumberland, in Pennsylvania—and Newtown and Geneva, in New York, to Great Sudus bay, on lake Ontario; and providing the means for its accomplishment in such form and manner as Congress, in its wisdom, may deem proper.

LADIES' DEPARTMENT.

THE WORLD NEVER KNOWN BUT BY A CHANGE OF FORTUNE

THE HISTORY OF MELISSA.

Diligitur nemo, nisi cui Fortuna secunda est, Quæ simul intonuit, proxima quæque fugat. OVID.
When smiling Fortune spreads her golden ray,
All crowd around to flatter and obey:
But when she thunders from an angry sky,
Our friends, our flatterers, our lovers fly.

Miss A. W.*

TO THE RAMBLER.

Sir,—The diligence with which you endeavour to cultivate the knowledge of nature, manners, and life, will perhaps incline you to pay some regard to the observations of one who has been taught to know mankind by unwelcome information, and whose

opinions are the result, not of solitary conjectures, but of practice and experience.

I was born to a large fortune, and bred to the knowledge of those arts which are supposed to accomplish the mind, and adorn the person of a woman. To these attainments, which custom and education almost forced upon me, I added some voluntary acquisitions by the use of books, and the conversation of that species of men whom the ladies generally mention, with terror and aversion, under the name of scholars, but whom I have found a harmless and inoffensive order of beings, not so much wiser than ourselves, but that they may receive as well as communicate knowledge, and more inclined to degrade their own character by cowardly submission, than to overbear or oppress us with their learning or their wit.

From these men, however, if they are by kind treatment encouraged to talk, something may be gained, which, embellished with elegance, and softened by modesty, will always add dignity and value to female conversation: and from my acquaintance with the bookish part of the world I derived many principles of judgment and maxims of prudence, by which I was enabled to draw upon myself the general regard in every place of concourse or pleasure. My opinion was the great rule of approbation, my remarks were remembered by those who desired the second degree of fame; my mien was studied, my dress was imitated. My letters were handed from one family to another, and read by those who copied them as sent to themselves; my visits were solicited as honours, and multitudes boasted of an intimacy with Melissa, who had only seen me by accident, and whose familiarity had never proceeded beyond the exchange of a compliment, or return of a courtesy.

I shall make no scruple of confessing that I was pleased with this universal veneration, because I always considered it as paid to my intrinsic qualities and inseparable merit, and very easily persuaded myself that fortune had no part in my superiority. When I looked upon my glass, I saw youth and beauty, with health that might give me reason to hope their continuance; when I examined my mind, I found some strength of judgment, and fertility of fancy; and was told that every action was grace, and that every accent was persuasion.

In this manner my life passed like a continual triumph amidst acclamations, and envy, and courtship, and caresses: to please Melissa was the general ambition, and every stratagem of artful flattery was practised upon me. To be flattered is grateful, even when we know that our praises are not believed by those who pronounce them; for they prove, at least, our power, and show that our favour is valued, since it is purchased by the meanness of falsehood. But, perhaps, the flatterer is not often detected, for an honest mind is not apt to suspect, and no one exerts the power of discernment with much vigour when self-love favours the deceit.

The number of adorers, and the perpetual distraction of my thoughts by new schemes of pleasure, prevented me from listening to any of those who crowd in multitudes to give girls advice, and kept me unmarried and unengaged to my twenty-seventh year, when, as I was towering in all the pride of uncontested excellency, with a face yet little impaired, and a mind hourly improving, the failure of a fund, in which my money was placed, reduced me to a frugal competency, which allowed little beyond neatness and independence.

I bore the diminution of my riches without any outrages of sorrow, or pusillanimity of dejection. Indeed I did not know how much I had lost, for, having always heard and thought more of my wit and beauty, than of my fortune, it did not suddenly enter my imagination that Melissa could sink beneath her established rank, while her form and her

mind continued the same; that she could cease to raise admiration but by ceasing to deserve it, or feel any stroke but from the hand of time.

It was in my power to have concealed the loss, and to have married, by continuing the same appearance, with all the credit of my original fortune; but I was not so far sunk in my own esteem, as to submit to the baseness of fraud, or to desire any other recommendation than sense and virtue. I therefore dismissed my equipage, sold those ornaments which were become unsuitable to my new condition, and appeared among those with whom I used to converse with less glitter, but with equal spirit.

I found myself received at every visit, with sorrow beyond what is naturally felt for calamities in which we have no part, and was entertained with condolence and consolation so frequently repeated, that my friends plainly consulted rather their own gratification, than my relief. Some from that time refused my acquaintance, and forbore, without any provocation, to repay my visits; some visited me, but after a longer interval than usual, and every return was still with more delay; nor did any of my female acquaintances fail to introduce the mention of my misfortunes, to compare my present and former condition, to tell me how much it must trouble me to want the splendour which I became so well, to look at pleasures which I had formerly enjoyed, and to sink to a level with those by whom I had been considered as moving in a higher sphere, and who had hitherto approached me with reverence and submission, which I was now no longer to expect.

Observations like these, are commonly nothing better than covert insults, which serve to give vent to the flatulence of pride, but they are now and then imprudently uttered by honesty and benevolence, and inflict pain where kindness is intended; I will, therefore, so far maintain my antiquated claim to politeness, as to venture the establishment of this rule, that no one ought to remind another of misfortunes, of which the sufferer does not complain, and which there are no means proposed of alleviating. You have no right to excite thoughts which necessarily give pain whenever they return, and which, perhaps, might not have revived but by absurd and unseasonable compassion.

My endless train of lovers immediately withdrew, without raising any emotions. The greater part had indeed always professed to court, as it is termed, upon the square, had inquired my fortune, and offered settlements; these had undoubtedly a right to retire without censure, since they had openly treated for money, as necessary to their happiness, and who can tell how little they wanted any other portion? I have always thought the clamours of women unreasonable, who imagine themselves injured because the men who followed them upon the supposition of a greater fortune, reject them when they are discovered to have less. I have never known any lady, who did not think wealth a title to some stipulations in her favour: and surely what is claimed by the possession of money is justly forfeited by its loss. She that has once demanded a settlement, has allowed the importance of fortune; and when she cannot show pecuniary merit, why should she think her cheapener obliged to purchase?

My lovers were not all content with silent desertion. Some of them revenged the neglect which they had formerly endured, by wanton and superfluous insults, and endeavoured to mortify me, by paying, in my presence, those civilities to other ladies, which were once devoted only to me. But, as it has been my rule to treat men according to the rank of their intellect, I had never suffered any one to waste his life in suspense, who could have employed it to better purpose, and had therefore no enemies but coxcombs, whose resentment and respect were equally below my consideration.

* Anna Williams, of whom an account is given in the life of Dr. Johnson.

The only pain which I have felt from degradation is the loss of that influence which I had always exerted on the side of virtue, in the defence of innocence, and the assertion of truth. I now find my opinions slighted, my sentiments criticised, and my arguments opposed by those that used to listen to me without reply, and struggle to be first in expressing their conviction.

The female disputants have wholly thrown off my authority; and if I endeavour to enforce my reasons by an appeal to the scholars that happen to be present, the wretches are certain to pay their court by sacrificing me and my system to a finer gown; and I am every hour insulted with contradiction by cowards, who could never find till lately that Melissa was liable to error.

There are two persons only whom I cannot charge with having changed their conduct with my change of fortune. One is an old curate that has passed his life in the duties of his profession, with great reputation for his knowledge and piety; the other is a lieutenant of dragoons. The parson made no difficulty, in the height of my elevation, to check me when I was pert, and instruct me when I blundered; and if there is any alteration, he is now more timorous, lest his freedom should be thought rudeness. The soldier never paid me any particular addresses, but very rigidly observed all the rules of politeness, which he is now so far from relaxing, that whenever he serves the tea, he obstinately carries me the first dish, in defiance of the frowns and whispers of the table.

This, Mr. Rambler, is to see the world. It is impossible for those that have only known affluence and prosperity, to judge rightly of themselves or others. The rich and the powerful live in a perpetual masquerade, in which all about them wear borrowed characters; and we only discover in what estimation we are held, when we can no longer give hopes or fears.

I am, &c.

MELISSA.

FEMALE GOVERNMENT.

Let the sons of a family lose their respect for their mother, and it will be utterly impossible for a substitute for natural authority to be found. I do say, (and do not say it rashly, or without much examination of the subject,) that those families, where the character of the mother is depressed to that of a mere house-keeper, are never well governed; and that, on the contrary, the sons of those mothers, whose rank in the family authorises them to be the counsellors of their children, are in childhood more amiable, and in manhood more worthy than others. If children are not under the government of the mothers, they must necessarily be left very much to their own guidance, and exposed to early associations unfriendly to virtue. Their characters will be mostly formed by the influence of adventitious circumstances: unless, indeed, the father can oversee them constantly, which is rarely the case. The father requires the boy to obey his mother, and perhaps gives him long lessons on the subject; but of how much weight they will be, in turning the scale between duty and inclination, when the child sees that the father does not respect her himself, it requires but little sagacity to conjecture. The habit of trifling, of dissimulation, and of rebellion, is thus acquired; and if grace effects an alteration in the state of the heart, it certainly operates under circumstances unfavourable to its growth.

[N. Y. Mirror.]

[Admitting the truth of the above, which nobody can deny, how much then obviously depends upon so educating and bringing up females, as to qualify them to be mothers of intelligence, good principles, and good deportment! How can an ignorant mother, devoid of cleanliness in her personal habits, of unpolished manners, and without a high sense of

honour and delicacy, give a good tone to the morals and a proper direction to the deportment of her children?]

MISCELLANEOUS.

REPORT OF THE BOARD OF ENGINEERS FOR FORTIFICATIONS.

Extract from the Report of the Chief Engineer to the Secretary of War, for 1826—dated Nov 18.

The Board of Engineers for Fortifications, besides having prepared a report on the defence of the sea coast, by fortifications, which was laid before Congress at the last session, have been, and are now, engaged in preparing projects of works for Charleston, Savannah and Pensacola.

An appropriation was made this year, for commencing and completing the Battery at Bayou Bienvenue.

Arrangements were made for commencing the work, but the result of experiments to ascertain the fitness of the soil, at the site selected, to support the foundations, having been unfavourable, a report was made to that effect, accompanied with a suggestion of the propriety of selecting another site. In a subsequent report, recently received, it is stated, that, on further examination and comparison of the site with others that might be selected, it has been ascertained to be as eligible with regard to soil, as any one that could be substituted for it, and that it will be practicable to render the foundations secure by alterations which will adapt them to the soil, and which will be submitted for decision as soon as the drawings for exhibiting them shall be prepared.

Fort Adams, at Brenton's Point.

More than three-fourths of the sum appropriated has been advantageously applied to this work during this year. Stone, fit to be used in the construction of the work, is now procured on the land purchased as an addition to the site. It is estimated the amount that may be saved, by the reduction of the price of that material, in consequence of its being procured in the manner stated, will be equal, or nearly so, to the cost of the land.

Fort Hamilton, at New Utrecht Point.

It was stated, in the report of last year, that the measures adopted to get possession of the land upon which a part of the work would be located, had been unsuccessful, and that, in consequence, only one half of the work had been laid out and commenced. The land in question was procured this year, but not until the season was too far advanced to lay out and commence the construction of the remainder of the work. The operations have been successfully and advantageously prosecuted, however, upon the part of the work which was laid out and commenced last year—the sum expended being greater than the amount of the appropriation of this year, and equal nearly to three-fourths of the amount available.

Fort Delaware.

This work will be finished in the course of the year. The injuries produced by the sinking of the foundations, will then have been thoroughly repaired. The subsidence of the foundations during this year, has been less than heretofore, and its tendency to increase old, and to produce new injuries, has been of comparatively limited extent. It is proposed to load the foundations, as soon as practicable, with the armament intended for the fort, and, by that means, should they be still liable to further subsidence, to accelerate it, that its maximum may be ascertained. It is believed, if the work does not now possess it, that it will be practicable to give to it, ultimately, the strength and stability requisite to the fulfilment of the objects for which it is designed.

Fort Monroe.

The large sums expended upon this work, during the current year, have been judiciously and advantageously applied.

Fort Calhoun.

The laying of the foundations of this work was commenced this year. On account of the depth to which it was necessary to carry them, the work could be conducted only while the tide was at its lowest stage, and has progressed but slowly in consequence of the frequent interruptions incident to this mode of carrying it on. When the foundations shall have been laid, the work may be expected to progress rapidly.

Fort Macon, at Bogue Point, North Carolina.

The encroachments of the sea upon the site originally selected for this work, made it necessary to select another site, and the time consumed in the surveys, and other preliminary arrangements requisite to the fulfilment of that object, delayed the commencement of the work until July last. Its progress since has been greatly retarded by the difficulty of procuring suitable materials and workmen. It is proper to remark that, although an appropriation was made last year to commence this work, no officer could be spared to undertake it until the month of November. The land requisite for the site of the work, has been valued by assessors appointed by the state of North Carolina, and the Engineer has been authorized to conclude the purchase agreeably thereto.

Fort at Oak Island, mouth of Cape Fear river.

An appropriation was made last year, for the commencement of this work also, but no officer could be assigned to its superintendence until late in the season. The site has been purchased, materials have been collected, and wharves and other conveniences to facilitate their reception, removal and preservation, have been prepared. Buildings for storehouses, for workshops, and for lodging workmen, have also been erected. Competent workmen could not be obtained in the neighbourhood, and arrangements have been made for procuring them from the north. On their arrival the main work will be commenced.

Fort at Mobile Point.

The construction of this work has progressed very favourably this year. On the 30th September last, the sum expended had exceeded the amount of the appropriation of this year, and it is believed the balance of the appropriation of last year will have been expended ere this.

Fort at Chief Menteur.

More than three fourths of the appropriation of this year has been applied in a satisfactory manner to this work. It may be completed next year with the sum estimated for that purpose.

Fort Jackson, at Plaquemine Bend.

The weather and other circumstances have been as favourable this year as they were disastrous last year, for carrying on the works of this fort. The limited extent of the work done last year has been fully compensated for by the quantity executed this year. The sum of 83,000 dollars was reported last year as remaining unexpended; it has been expended, together with 23,000 dollars of the 90,000 dollars appropriated this year. The remaining 66,000 dollars will have been expended by the first of March next.

The Sea Wall, for the preservation of George's Island, in the harbour of Boston.

This operation is connected with the subject of fortifications, George's island having been purchased as the site of a fortification. The work has latterly progressed very rapidly, but its progress during the early part of the season, which was the most favourable for carrying on the work, was retarded greatly by the delinquency and ultimate failure of

the contractor who had undertaken to execute it. It is expected that the work will be in a condition, at the expiration of this month, to afford the desired protection to the island during the approaching inclement season, and that it will be finished early next year. Materials of the most durable quality, and workmanship of the best kind, have been applied to so much of the work as has been executed.

The repair of Fort Constitution, at Portsmouth, New Hampshire.

This operation was authorized by a distinct appropriation, and will be completed in the course of this year.

The site for a Fort at Throg's Point, in Long island Sound.

Has been purchased, in fulfilment of an appropriation for that purpose. The appropriation also contemplated the purchase of the privilege of the right of way through the grounds adjoining the site. This has not been done, because such a one as was desired could not be obtained.

It is proper to state, that expense would be saved and facility afforded to the prosecution of the fortifications, if appropriations for them, entire or partial, could be obtained at the commencement of the session of Congress.

The Board of Engineers for Internal Improvements have been occupied chiefly during this year in preparing their reports on the national road from the seat of Government to New Orleans, and the Chesapeake and Ohio Canal, both of which have been completed. Connected with the object last stated, they have examined the Wills' creek and Castleman river route, which had not before been examined by the Board. They have also fulfilled the duties assigned them by the act of the 18th of May last, for the subscription of stock in the Dismal Swamp Canal Company, and a copy of their report is transmitted herewith. Besides the foregoing, the Board have prepared instructions relating to surveys; have inspected the Delaware and Chesapeake Canal; and are now engaged in an examination for the purpose of locating a mail route between Baltimore and Philadelphia.

The Board have been so entirely occupied with the objects just stated, that they have not been able to prepare the project for a canal to connect Lake Ponchartrain with the Mississippi river, which was stated in the report of last year as one of the objects to which their early attention would be given. It will be completed, if practicable, before the Board proceed to the examinations relative to the Florida Canal, the Canals to connect the Coosa with the Tennessee, and to overcome the obstructions in the latter at the Muscle Shoals, and other objects to which their attention will be directed in that section of the country. But if it cannot be completed before those examinations shall be commenced, it will be attended to as soon as the Board shall be disengaged from them.

LOST HOURS

One person rises in the morning at half past nine, another at six. If each live to be fifty years old, the one will have enjoyed sixty-three thousand, eight hundred, and seventy-five hours, or *two thousand six hundred and sixty one days*, more than the other. Let us suppose, that there are throughout Great Britain, one million, five hundred thousand persons, who rise at a quarter past nine or later. Of these, perhaps, nine hundred and fifty thousand would, if they rose at six, be usefully employed. At this rate, fifty six thousand three hundred and forty-six millions, eight hundred and seventy five thousand hours, or six millions, four hundred and thirty-two thousand, two hundred and ninety two years of individual improvement are lost to society, every half century. This is supposing, that these nine

hundred and fifty thousand get up at a quarter past nine, whereas thousands do not leave their beds till eleven or twelve.

All this time is uninterrupted day, and composed of hours in which the intellect is far clearer and more fit for study, than the rest of the day.

It must be remembered, too, that nothing conduces more to health, and consequently to longevity, than early rising.

Suppose, out of the above number of persons, five hundred thousand should live four years longer than they otherwise would have done, viz. fifty-four years instead of fifty; according to the ratio above, here are *two millions* more years of actual existence utterly wasted.

CATS.

The first couple of cats which were carried to Cuyaba sold for a pound of gold. There was a plague of rats in the settlement, and they were purchased as a speculation, which proved an excellent one. Their first kittens produced thirty *oitavas* each; the next generation were worth twenty; and the price gradually fell as the inhabitants were stocked with these beautiful and useful creatures.

Montenegro presented to the elder Almagro the first cat which was brought to South America, and was rewarded for it with six hundred pesos.

[*Southey's Brazil.*]

SPORTING OLIO.

PLAY OR PAY.

ST. LEGER, DERBY, AND OAKS—PLAY AND PAY BETS. *To the Editor of the Annals of Sporting.*

In answer to the question (whether a bet on the Derby is considered p. p or not) contained in your letter, dated June 15th, but which did not reach me till Monday, the 26th, on account of my absence from home, the better plan, perhaps will be to recapitulate certain rules relative to horse-racing, which bear upon the point, and do not appear to be generally understood.

"That all *double bets* shall (on account of the frequent disputes which have arisen) be considered as *play or pay bets*.

"The person who *lays* the odds has a right to choose his horse, or the field.

"When a person has chosen his horse, *the field* is *what starts against him*, but there is *no field* unless *one starts with him*.

"Bets determined, though the horse does not start, when the words 'absolutely,' 'run or pay,' or 'play or pay,' are made use of in betting. For example, I bet that Mr. Udny's ch. m. *Mirandola*, absolutely wins the King's Plate, at Chelmsford, in 1824. I lose the bet though she does not start, and win though she goes over the course alone.

"Horses that forfeit are the beaten horses, where it is run or pay.

"*Thatched house*, June 1, 1815.—At a meeting of the Stewards and Members of the Jockey Club, held this day, it was resolved, that no bet, which shall be made on the Derby or Oaks Stakes, after the first day of June, 1815, shall be considered as play or pay, unless specified as such, between the parties, at the time the bet is made.

"That the above regulation be applicable to the St. Leger Stakes, at Doncaster, from the first day of October, 1815."

Thine as ever,

Hyde Park Corner, {
June 27, 1826. }

JOHN FROST.

Items from the Annals of Sporting of July 1826.

June 12, 1809—Captain Barclay completed his arduous undertaking of walking one thousand miles

in a thousand successive hours, on Newmarket-heath, for a wager of one thousand guineas. Upwards of 1100,000 are said to have been betted on the event.

July 17, 1720—Mr. Bernard Calvert started, at three, A. M. on horseback, from St. George's, in the Borough, proceeded to Dover, crossed, by barge, to Calais, returned in the same way, and arrived at St. George's church, fresh and hearty, about eight, P. M., thus completing his undertaking in seventeen successive hours.

July 26, 1805—Mr. Thompson, a clerk in the Ordnance department, undertook for a wager of twenty guineas, to run a mile in five minutes; he performed his task within three seconds of the time allowed. The Mall, in St. James's Park, was selected as the ground—time, early in the morning.

Huntingdon, July 28, 1763—A quarter-of-a-mile match was run for one hundred guineas, between a gentleman and a gray gelding with one leg tied up, and won by the former. The horse's leg untied in running.

July 30, 1817—Mr. Wells's *Pipylina* mare trotted twenty four miles in one hour, twenty minutes, and five seconds, carrying a boy weighing seven stone, for a wager of one hundred guineas, starting from Hornchurch, in Essex; time allowed, an hour and a half. The mare performed sixteen miles in fifty-seven minutes. She was started again at the hour, after cleaning her mouth, when she completed the remaining eight miles in twenty three minutes and five seconds.

July 31, 1771—Dunhavid, by Ivory Black, in running against Minor, the second heat for the King's Plate, at Canterbury, struck his hind foot into the fore pastern, and broke his leg. Three to one on Dunhavid, who had previously won the Plate at Salisbury and Winchester.

POETRY.

The following sweet, plaintive, and appropriate lines, were sent us last evening, by a young lady, as the signature indicates; and we shall always be proud to adorn our columns with the inspirations of the same muse. [*N. Y. Evening Post.*]

THE DYING YEAR.

The dying year! How are those few words fraught With images of faded loveliness!

How doth it fill, with dreams of saddened thought, The heart that sighs for all that once could bless! It falls with mournful sound upon the ear, The knell of something we have long held dear.

Thou frail and dying year! ah, where are now The charms that have in turn been all thine own? The spring's young bloom, the summer's ripen'd glow,

The autumn's varied splendour—all are gone! And thou art sinking in oblivion's wave— Would that the griefs thou gav'st might then too find a grave!

Aye, years may pass; but yet time's rapid flight Would be unheeded, were it not he flings A cloud o'er all youth's hopes and fancies bright: Alas! he bears upon his shadowy wings Darkness, distrust, and sorrow, while the mind Broods o'er the gloom to which it is consigned.

Thou dying year! hast thou not swept away Joys dearer far than any thou hast left? Have we not seen our hopes, with thee decay— Found ourselves desolate? And thus bereft Of all the fairest brightest things of earth, Have we not turn'd away, sick of the world's mirth?

Have we not prayed that thou wouldst quickly fleet.
When we were sunk in sorrow's deepest gloom;
Have we not learn'd each coming day to greet,
Because it brought us nearer to the tomb?
And thou hast fled; and with thee has past
The strong, deep misery that could not last.

Sorrow treads heavily, and leaves behind
A deep impression, e'en when she departs;
While joy trips by, with steps light as the wind,
And scarcely leaves a trace upon our hearts
Of the faint footfalls: only this is sure—
In this world nought, save suffering, can endure.*

Yet thou art a kind monitor, and we,
In thee may mark the progress of our lives:
My spring time is yet new—I ne'er may see
A summer; and the fruits that autumn gives,
For me, may never ripen. O'er my brow,
Ere then, the grass may rustle. Be it so!

IANTHE.

RECIPES.

APPROVED METHOD OF KEEPING CROWS FROM CORN LANDS.

Take a quart of train oil, as much turpentine, and bruised gunpowder; boil them together, and when hot, dip pieces of rag into the mixture, and fix them on sticks in the field. About four are sufficient for an acre. The birds assuredly will not approach the spot. The expense of the above remedy, for the evil occasioned by large flocks of ravenous birds infesting corn-fields, is a trifle, compared to the injury sometimes sustained in a few hours.

Richmond county, Va. 26th Nov. 1826.

DISTEMPER IN DOGS.

Dr. Blaine has described the disease called the Distemper in Dogs, with accuracy, and his medicines, in general, are successful; but a gentleman had administered Dr. Blaine's medicines to a favorite pointer, in the disease called the Distemper, but with no avail; the unvarying symptoms had come on, when the poor animal crawled into the field, and fell among some grass, attempting, but in vain, to eat it. The gentleman followed this suggestion of nature, and ordered a handful of grass to be cut in shreds of about half an inch long, and when mixed with butter, to be put down the animal's throat: the dose was repeated three times in every twenty-four hours, and a visible amendment almost immediately took place, which terminated in recovery.

WASHING COTTONS AND LINEN.

Never wash muslins, or any kind of white cotton goods, with linen; for the latter deposits or discharges a gum and colouring matter every time it is washed, which discolours and dyes the cotton.—Wash them by themselves.

DROPSY.

A late Paris paper states, that a woman was cured of a compound dropsy of long standing by drinking a glass of liquor three times a day thus prepared:—three handfuls of white cresses and four white onions boiled in three quarts of water, and reduced to one-third.

NEW METHOD OF MAKING JELLY.

Press the juice from the fruit; add the proper proportion of sugar, and stir the juice and sugar until the sugar is completely melted; put it into jars, and, in twenty-four hours, it will become of a proper consistency. By this means, the trouble of boiling is avoided, and the jelly retains more completely the flavour of the fruit. Care should be taken to stir the mixture until the sugar is completely melted, and fine sugar should be used.

*"Ah! null' altro che pranto al mondo dura." PETR.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 12, 1827.

Wanted by the Editor, for distribution, some of the seed of the early black-seed cotton, and seed of the Havana segar-tobacco. The original seed from that country will be preferred to that which is the growth of tobacco raised in this country.

The gentleman who called for the pedigree of the celebrated horse *Tuckahoe*, begs to renew his request, and is the more anxious, as he owns some of his stock, which he has been prevented from selling for want of the means of tracing the pedigree of that distinguished racer.

WILLIAM ZOLLICKOFFER, M. D., has been elected an honorary member of the "National Society of Natural Sciences of Switzerland;" and an honorary member of the "Washington Medical society."

MEDICAL LITERATURE.

DOCTOR ZOLLICKOFFER'S *Materia Medica* of the United States, greatly improved, is now in the press, and will be completed in a few weeks. This work includes all the native medicinal plants of this country, which gives it an advantage over every other work extant upon this subject.

Jan. 12, 1827.

WRITING.

Directions for improving the hand writing in a few hours.

The learner should shove the pen with the greatest degree of quickness, and make every downward stroke entirely straight, from line to line, and bear heavy, and equally heavy on the pen, without lifting it, in going through any word. All the capitals, as well as the small letters, should be made entirely straight, and slanted very much, and equally, and placed at proper distances. The lines may be ruled about one-third of an inch apart, and the words *men* and *now* should be written from line to line, between all the lines, and the words *by, all, these, John, James, presents*, between every other line. Each of the above eight words should be written by itself, over one side of a quarter of a sheet of paper. By writing three or four sheets of paper, according to the above directions, a very great change can be effected in the hand writing, in a few hours.

The coarse hand will look something like the work of beginners. The parent or teacher should give the first fine hand copies in the same words as the coarse hand; *Know all men by these presents, that I, John James*. It should be written no faster than it can be done well.

The book containing every necessary instruction, with wood and copperplate engravings, and the hand writing transferred to stone, and printed from it, can be obtained by Post Masters for 25 cents in specie, and one-fourth deduction, by the dozen.

The price of my Dictionary for the use of schools, is 25 cents. It cannot be conveyed by mail without too great expense, except in numbers of 36 pages each; 20 numbers may be had for a dollar. Both books may be had by wholesale or retail of E. L. Williams, No. 11, Front street, New York. Any editor who will publish the above, and forward a paper containing the insertion, shall receive two copies of the book on writing.

Jan. 12, 1827.

CALEB HOPKINS.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00			
BACON, and Hams, . .	lb.	6	10	9	12
BEES-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16½	20	22
Havana,	—	14	16		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	11½		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	16	16	18
Dipt,	—	11	13		15
CHEESE,	—	8½	12	12	15
FEATHERS, Live, . . .	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	5 50	6 00		
FLAXSEED,	bush	1 00	1 10		
FLOUR, Superfine, city,	bbl.	4 87½	5 00		
Fine,	—	4 75			
Susquehanna, superf.	—				none
GUNPOWDER, Balti	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	52	53		
white	—	55			
Wheat, Family Flour,	—	1 05	1 12½		
do. Lawler, & Red, new	—	90	95		
do. Red, Susque. . .	—	95			
Rye,	—	75			
Barley, Eastern . . .	—	1 22	1 25		
Do. country	—	90	1 00		
Clover Seed, Red . .	bush	4 50	5 00	5 50	
Ruta Baga Seed, . .	lb.	87		1 00	
Orchard Grass Seed, .	bush	3 50			none
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed, . . .	—	4 00		5 00	
Oats,	—	40		50	
Beans, White,	—	1 25	1 50	2 00	
HEMP, Russia, clean, .	ton	250			
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	18		25	
HOGS' LARD,	—	7	10	12	
LEAD, Pig	lb.	6½	6½		
Bar	—	7½	8		
LEATHER, Soal, best,	—	21	25	32	
MOLASSES, sugar-house	gal.	30	50	62½	75
Havana, 1st qual. . .	—	30	32	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	1 75			
Turpentine, Soft, . .	—	1 75			
Oil, Whale, common, .	gal.	33	34	40	
Spermaceti, winter .	—	75		88	
PORK, Baltimore Mess,	bbl.	11 00	11 50		
do. Prime,	—	8 50	9 00		
PLASTER, cargo price,	ton.	3 50			
ground,	bbl.	1 50			
RICE, fresh,	lb.	8½	32	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	8	10	12
WHISKY, 1st proof, .	gal.	33	35		50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	31		50	
SUGARS, Havana White,	c. lb.	12 50	13	14	15
do. Brown,	—	10 00	10 50		
Louisiana,	—	7 25	9 20	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	15	16	25	
SALT, St. Ubes, . . .	bush	43	47	75	
Liverpool ground . .	—	54		75	
SHOT, Balt. all sizes, .	clb.	8 50		12	
WINE, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinners' or Pulled, .	—	20	25		

Printed every Friday, at \$5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOR, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

ON GENTLEMAN FARMING.

(From Lorain's Husbandry.)

Observations on the causes which have increased gentleman farming. Their expensive establishments considered.

The frequent recurrence of the yellow fever in our seaport towns, compelled multitudes of citizens to take refuge in the country. This created a taste for rural pursuits, and induced numbers (whose finances did not well accord with it,) to form country establishments. As it was too generally supposed that an addition of land for farming, would lessen the expense, this still more injurious plan was adopted by many; and immense sums of money wasted in a business, with which they were entirely unacquainted.

Other gentlemen, who have either by their own industry, or from inheritance, acquired handsome estates, become tired of the business or pleasures which are pursued in towns. Citizens of this description, generally keep carriages for the recreation of themselves and families, and their excursions into the country, are commonly pleasant relaxations from their pursuits in town. This prepares the mind to be infatuated with rural economy; especially as the grounds in the vicinity of our larger towns have been enriched and improved with more taste and skill, than generally takes place elsewhere. Luxuriant crops, with numerous flocks and herds, are seen in every direction.

Poets, with other writers, attribute to rural pursuits, all the rational pleasures which constitute the chief happiness of man. In doing this, they, however, appear to have forgotten that these beautiful scenes which they so elegantly describe, are the effect of immense labour and fatigue.

The gentleman whose imagination has, in all probability, been excited by recollecting some of the most appropriate passages from these authors, appears also to forget, or not to know, that agriculture, when properly pursued, under the most favourable circumstances, requires very great attention, both early and late; and that there are very few employments which have more crosses, losses and disappointments, necessarily attached to them. An epidemic sometimes sweeps off live stock, as with the besom of destruction. If this does not happen, all animals are liable to disease or accident, and a considerable portion of the farmer's stock is vested in them. Mildew, smut, with numerous blights, also excessive rains, storms, a scorching sun, drought, untimely nipping frosts, and insects, (which are sometimes as destructive as an invading army,) destroy the farmer's most flattering expectations.

However, the gentleman seems to expect to rest from all his labours, when he commences farming. Every jaunt into the country confirms this sentiment, and he returns with increased reluctance to the smoke, dust, bustle and putrid effluvia of the city. These annoyances appear to be greatly exaggerated by his heated imagination, and every succeeding excursion increases the delusive expectation of happiness in rural pursuits; which, saying the least of what may happen, will certainly doom a few years of the gentleman's life, to continual perplexity, unless his conduct in the country be governed by much caution, and a very uncommon share of prudence. Farming, as it is now practised, (especially by those who depend principally upon books,) is a very complex business; and if this science were stripped of its complicated absurdities, and reduced to a perfect and simple system of management, still, as it is only by practice that we become intimately acquainted with the most simple employments, it would seem that the gentleman ought to serve an apprenticeship with some

distinguished farmer, before he embarks on his own account, in a business with which he is entirely unacquainted. Certainly, if he be a merchant, he would not trust the command of his ship to any person who had never been at sea, although he might believe him intimately acquainted with the theory of navigation. Yet I believe it will be found at least equally hazardous for a gentleman who can command a plenty of money, and possesses a generous disposition, to encounter a farm without practical information, unless his theoretical knowledge be founded on principles, which are consistent with his peculiar situation, and he has sufficient firmness not to deviate from them. As this, however, has seldom, if ever, occurred, and it is impossible to say what may happen hereafter, I shall proceed to describe what has but too frequently taken place heretofore.

When a gentleman wishes to commence farming for the purpose of getting rid of the troubles and vexations of the world, he generally resorts to books for information. These clearly and very justly convince him: that full bred farmers do not manage their agricultural concerns, any thing like so advantageously as might be done; also, that much greater profit might be readily obtained, if farming was properly conducted. Firmly believing in these books, and that they have, at least, taught him the rudiments of agriculture, he resolves; and the farm is bought without duly observing, and of course without sufficiently considering, that the different opinions of the authors, give contradictory theories, consequently, he has actually to learn, from his own practice, which of them is right; or whether the whole of them may not be essentially wrong, in many cases in which his prosperity may be highly interested. Such information as this in the hands of a zealous novice, is something like a sword in the hands of an enthusiastic revolutionist, who does not distinguish between the rational principles of liberty and licentiousness. If the practices recommended by writers on agriculture, were always accompanied with a clear explanation of the beneficial causes brought into operation by them, the gentleman farmer, even in the commencement of his business, would be much better enabled to determine their probable merit by comparing them with practices recommended by other writers on the same subject: especially as it may be laid down as a maxim in farming, that no practice can be proper if it be opposed to reason. It is therefore to this faculty, that every writer should apply his subject. If this be not done, the reader has either to supply the defect by his previous knowledge of the subject, or to remain ignorant, further than bare assertion goes. If he should act on the faith of this, he may be egregiously disappointed, as the patient who swallows the pills, powders, or anodynes, of an ignorant quack who invents specifics to cure, and also to prevent, every disease in nature, and boldly offers them to the public, (and but too frequently with success,) although the causes which produce these wonderful effects, remain a secret not only to his credulous customers, but also to himself. This is equally applicable to the plain, practical farmers, who, for the most part, are greatly opposed to books on agriculture, for which I now believe (though I once thought otherwise,) they have been too severely censured.

This prejudice seems to arise from their being too often disappointed by the promises of great profit from practices which were better calculated to ruin them than increase their revenue, for it must be confessed that but too many of this stamp have appeared. They have either been predicated on elaborate calculations founded on erroneous principles, or on certain rounds or courses of crops, as if the interest of agriculture was to be promoted by the means taken by writers on cookery, who furnish recipes to compound dishes agreeable to every

palate, as well as to suit every possible occasion that may happen, from a wedding and christening, to a death and funeral. The self-taught Kliyogg, or the Rural Socrates, with many other instances, should teach writers on agriculture, that nature is not partial to any grade or society in the distribution of talents: consequently, that common farmers are very far from being so stupid as too many have represented them to be. If subjects calculated to promote their interest were properly applied to their reasoning faculties, they would be as capable of reasoning on plain, practical facts, as the learned.

But to return. So soon as the gentleman takes possession of the farm, his trouble commences.—The previous habits, of a family from town, seem to be immediately opposed to the simplicity of rural economy. The dwelling house may be sufficiently large, also warm in winter and airy in summer: still, his family or himself too often discover that the floors have been formed with broad oak or pine boards which have too many knots in them. The chimney or fire places are too large, and being without either marble hearths or jambs, are intolerable; the ceilings are too low, and the plastering has become scaly from frequent whitewashing, and cannot be made to look well; the windows are entirely too small, and small glass divided by too much wood in the sash excludes the light; the staircases are confined, and the height of the steps will fatigue the family. A single row of small glass, placed over the top of the front door, had been found sufficient to light the former farmer on his way up stairs, or to enable him to find a bag or any other thing deposited in the entry. The gentleman's family, however, cannot grope in the dark; and, besides this inconvenience, the large door posts seem better calculated to support a gate than the front door of a gentleman's house. The steps leading from the door, in place of being marble, are made of free stone; the height of them is quite too great, they extend but little on either side of the door, and, as the last step terminates at the bottom of the door, still there is no platform in front.

A consultation is held, and frequently ends in the condemnation of a convenient and very useful house, well calculated to promote the future ease and tranquillity of a rational farmer; and it too often happens (even when the gentleman cannot conveniently spare the money,) that the building is completely gutted and modernized, or appropriated to accommodate the hired farmer or head man and his family, and a new one is erected for the master.

If the gentleman determines on the latter, he acts wisely, as after much money has been spent in altering, even an excellent house, that has been built to suit the convenience and finances of a plain, practical farmer, it is but a botched piece of business at last; however, in either case, the money commonly expended, does not accord with any rational estimate of the income that may be derived from the farm.

But what makes the matter still worse, the alterations and amendments too seldom stop at the mansion house. An ice house, with various other buildings and conveniences, which a plain, practical farmer seldom thinks of erecting, seem to be considered necessary to the establishment of the gentleman farmer.

These things, in detail, appear to be trifles; but a very serious expense occurs before they are finished, as they are commonly erected on the most approved plan, and too often expensively ornamented. The garden is seldom found sufficiently large or properly arranged. It is therefore considerably enlarged, and properly laid out and regulated; the walks gravelled, and a green or hot house too often erected, where the ornamental and useful exotics of southern climates are abundantly introduced. Besides the pleasure arising from seeing, displaying, and using these rare productions of nature, it is

Not only will agriculture be the backbone of agricultural production, but it will be the backbone of the economy, but, perhaps, the most important thing is that it will be the backbone of the nation's growth, and it will be the backbone of the nation's progress, and it will be the backbone of the nation's future.

without serious inconvenience to the people, and the beds of the old ponds may be converted into corn fields and meadows, yielding, from their fertility and moisture, immense crops. Besides, our country is intersected by numerous swamps, and we have extensive marshes and sunken grounds—all of which, as well as the mill ponds, are fruitful sources of ill health to the inhabitants of the adjacent country, (forming by far the larger portion of lower Virginia,) at the same time that they are entirely useless, although they would prove an immense source of wealth to the owners, if cleared and drained. These lands are by far the most fertile in our country, and the only grass lands we have. The awarding prizes to those, who should raise the greatest quantity of hay, or of Indian corn, from a given number of acres of unimproved ground, would drive all competitors to this description of lands. The draining of them, even if confined at first to a few of the most enterprising agriculturists, would yet in the end be productive of wonderful effects. It would act in a geometrical ratio on further reclamations, and, of course, in the same proportion on their agricultural products, and the healthiness of the country. It would not only spread information, and furnish the light of example to neighbours owning land of the same character, but the greater the portion of any body of land that is drained, the more easily is the remaining quantity reclaimed. The operation would be observed, by those most interested in observing closely, and of course most apt to derive information from it; and when they should attempt to apply the knowledge thus gained to their own contiguous lands, they would find the task much easier than anticipated, from the circumstance above alluded to. We conceive, therefore, that we may confidently expect, that the awarding of such prizes will go far to effect our last and most important object in view. Our country is prevented, only by the unhealthiness of the region and the want of enterprise among the citizens, from being the garden spot of Virginia. Any thing, then, which will encourage a spirit of enterprise and render the country more healthy, must be considered a great and lasting benefit to us and our posterity.

For the present we adopt the following constitution:

1. Our society shall be called the Agricultural Society of lower Virginia.
2. Williamsburg shall be the place at which the meetings of the society shall be held.
3. Annual meetings shall be held on the second Monday in March, and at such other times as the society may adjourn to, or the President or Vice President may appoint, under the authority herein-after given them.
4. The members may vote in person or by proxy, and nine votes shall constitute a quorum.
5. The officers shall be a President, Vice President, Clerk, Treasurer, and Steward, who shall hold their offices twelve months, and in case of absence or inability (to be judged of by the society,) of any officer, his absence shall be supplied by election, until he attends, or his disability is removed.
6. There shall be a standing Committee of Correspondence, to consist of five members, any three of whom may act, to be appointed in such manner as the society may determine.
7. The elections shall be held at the regular meetings in March, at which, also, the subjects for prizes shall be fixed, and the necessary arrangements made for awarding them.
8. The President, or in case of his absence or inability, the Vice President, may call a meeting by advertisement, in some paper of extensive circulation.
9. The members shall each pay every year two dollars and fifty cents, and all who join the society shall be considered members, until they apprise the

Corresponding Committee in writing, of their wish to be discharged.

10. Any proposition having in view an alteration or amendment of the constitution, shall be read at one meeting, and laid over to the next, when it shall be rejected, unless a majority of all the members of the society concur in accepting it.

On the motion of Dr. Waller, it was resolved, that the election of officers for the society be deferred to the next regular meeting.

The society then proceeded to the appointment of a Committee of Correspondence—and Judge Semple, Dr. Robert P. Waller, James Semple, Jr. William B. Taylor, and Allen Marston, were elected.

On motion of James Semple, Jr. Esq., resolved, that the proceedings of the meeting be published in the Richmond Enquirer, and that two hundred copies of the preamble and constitution be printed, and that the Committee of Correspondence receive subscriptions thereto, by agents or in person, in all the counties in Virginia below the head of tide water.

The society then adjourned to the next regular meeting.

ARCHER HANKINS, *Chairman.*

WM. F. PEARCE, *Sec'y.*

ON THE MANAGEMENT OF SHEEP, &c.

By Benjamin Sutton, of Seneca.

(From the Memoirs of the Board of Agriculture of the State of New York.)

To JESSE BUEL, Esq.,

Dear Sir,—Having received a circular, addressed to me, requesting me to communicate to the Board of Agriculture for the State of New York, what little information I possess, as a farmer, I know of no better way than to give a short account of my operations for several years past; which are as follows:

In tilling the earth, I consult the nature of the soil: if sandy, I leave the surface smooth, in order to retain the moisture as long as possible; if the soil is heavy, I lay it in ridges, so as to carry the water off as soon as possible. The ridges are made by throwing eight furrows together, and cleaning out the middle furrows between the lands, which always ought to lay so as to take the water off. I followed this mode of farming many years, but finding my farm fast decaying under the plough, and knowing that no farm will keep itself in heart without barnyard manure, I turned my attention to the raising of horses and cattle, with very good success; but I never suffered my young stock to stand crooked with hunger or cold, in their first year's growth; for if they are allowed so to do, they will grow crooked as well as a twig when bent. I think that if farmers in general would feed to two, as much as they do to three, their nett profits would be much greater. After these several experiments, my land being mostly of a heavy nature, I found that stock travel ling over the fields, packed the land so hard that it must be ploughed often, or it would bear no grass; and as my good fortune would have it, I had twenty calves and sixty sheep feeding at my barn; and I always found that the twenty calves eat more hay than my sixty sheep; and I found by observation that my sheep trod so light, that they did not poach the land into mud, and leave it so hard that nothing could grow on it, until it was pulverized by the frost, or ploughed again. And as the raising of sheep is so little understood in the United States, I shall give my experience nearly at full length on that head. In 1814, I sold my horses and cattle off and commenced raising Merino sheep, and had all the disadvantage of inexperience to encounter—which proved almost fatal. I wintered my sheep in the open air, without sheds; my lambs came in

February, and mostly all died; and those that survived were poor little nurlly things, and mostly all died the next winter. I also lost about one-fifth part of my old sheep, which I think was mostly owing to their being constantly exposed to the cold rains and snow; for they were well fed. I then built sheds to shelter them in bad storms, but did not take my bucks from my ewes. The lambs came in February, and the greater part died; and the remainder were poor, scrawny things. I then found, for the first time, that the ewes had but little milk, which was owing to their being fed on dry food. The next year, I put my bucks with my ewes, the twentieth October: had better luck. The next year, I put my bucks tenth November: had still better luck. The next year, put my bucks the first December; and from one hundred and fifty-six ewes, raised one hundred and fifty-four lambs; which great success was chiefly owing to the season of the year the lambs came in; the ewes then having plenty of milk, and the cold storms mostly over. I never let my ewes have the buck until they are upwards of one year old: my reason for so doing is, they lose two fore teeth when they are one year old, and cannot gather grass enough to support themselves and lamb, and are both spoiled. My sheep sheds, before mentioned, have large spaces left open at the sides, about four feet from the ground, which lets the air circulate freely above their backs, and carries off the stench. I also have racks with bottoms to them, in order to keep them from running over their feed, or getting their wool full of hay seed, which is injurious.

When properly managed, sheep are the most profitable animals raised upon our farms; as they supply, in their fleece, carcass and tallow, the most urgent wants of man. I beg leave to remark, that their real value seems not to be well understood by our legislature, or they would lend a fostering hand to so valuable an animal. The United States can never be an independent nation, until we manufacture our own cotton and woollen cloths.

GOVERNOR LINCOLN'S FARM.

(From the New England Farmer.)

We, not long since, took a morning's ramble over the farm of his excellency Governor Lincoln, adjoining his seat in Worcester; and were much gratified, as well as instructed by our excursion. We observed, among other things, an exemplification of that important fact, viz. that the best soil in Massachusetts consists, or may consist, of reclaimed upland marshes; and that the agricultural resources of New England will never be in the highest practicable degree developed till her unproductive, unsightly, and unwholesome swamps are brought under cultivation. The droughts of our soil and climate, according to maxims of philosophy, and the records of experience, will be, on an average of seasons, more and more severe, as the country is cleared of trees, and laid open to the unobstructed influence of the sun's rays. Dr. Deane observed on this subject, "it is in the power of the farmer, in a good measure, to guard against the ill effects of drought. It is a matter that certainly ought to be attended to in this country, in which almost half our summers are complained of by many, as being very dry. The best method is, to have more of our lowest lands under the best improvement in tillage. If this were the case, we should not so often hear of a scarcity by drought. If it were become customary to plant and sow on drained lands, and in those which are so low and wet as to need laying in ridges, possibly our dry summers would be as fruitful, on the whole as our wet ones. But, as we manage our lands at present, the case is far otherwise. A great number of people are always reduced to a distressed condition by a dry summer. And they are too ready to consider the shortness of th

crops, in a dry year, as a divine judgment, though they might have prevented it by a more prudent management."

We visited Governor Lincoln's farm the 12th of October, and of course before the crops of the latter harvest had been gathered. Every barn, and other receptacle for farm produce, was, however, already full to overflowing. Even the floors of the barns were crowded with hay and corn stalks. The latter were of a lively green, having been collected as soon as cut, and dried under cover. It would seem that the drought had passed lightly over his excellency's land, although it laid a withering hand on most of the farms in New England. This was owing to the nature of the soil. In a farm of more than three hundred acres, somewhat more than one hundred, while in its natural state, was, we believe, a rugged, barren morass. But, drained and subdued by skill, industry, energy and perseverance, it had become remarkably fertile. The crops on this portion of the farm were rather benefitted than injured by dry weather: and probably those on the higher and drier portions received advantage from the manure obtained from the ditches, knolls, &c. of the lower part. At any rate the crops were excellent, and mostly produced from a tract, which, but a few years since, was fit for nothing but a habitation for frogs and water snakes.

We think it a fortunate circumstance, that Gov. Lincoln, and others, whose character and intelligence place them in the first rank in society, should take and deserve the lead in that pursuit which is of the highest importance to the community, and gives beneficial and indispensable employment to the greatest number of its members.

THE COLOUR OF CATTLE.

A writer in the New England Farmer, under the signature of Agricola, attributes much importance to the colour of cattle. "Having been for some years a considerable traveller in New England I have noticed that the best farmers always have the best cattle. Where you find, as in Worcester county, large barns, strong walls, square lots, great crops of rowen, huge wood piles, fat horses, well painted houses, and all the ordinary indications of plenty and independence, you invariably find red or brown oxen and cows. Selection from his calves for three or four years, of red, brown, or brindle, by any farmer, will soon teach him the value of the expedient: a bright red is to be preferred; but the next to this, the brown, and then the mixture of both, (the brindle,) which is an excellent hardy colour for working oxen. No purchaser of oxen or cows overlooks the article of colour."

RURAL ECONOMY.

BORING FOR WATER.

Messrs. F. & T. Pollock have succeeded in boring for water at their distillery in this place. Having commenced upon a rock, they proceeded to the depth of one hundred and twenty feet from the surface. The water rises and flows at the rate of one and a half gallons per minute. The supply being sufficient, the process was suspended. The boring was done by Samuel Orr, of this borough, (Milton, Pa.) [Miltonian.]

GERMAN KITCHEN.

A German kitchen is the true cabinet of curiosities; all things in it are in a character so fanciful and freakish. The cook's idol, or dumb assistant, is represented by a wooden figure, a bloated, fat, squad of a gourmand; his paunch conceals numerous small drawers for holding spices and other ingredients of gout-giving condiments.

Near it hangs a painted board, where in compartments, the various materials for all high seasoned and savoury dishes are duly displayed, to assist the bewildered memory of that busiest and most important of personages—a head cook. In the closets and cupboards here, you find glass and china of every sort and quality then known, and of various whimsical shapes. For instance, glass animals, or monsters, perform the parts of cruets; and among the glasses for wine, are numerous as quaint in form, and as capacious as the bear of Bradwardine. There is also a complete table service of china ware, the cover of each dish representing that which is served up within, as turkey, peacock, wild fowl, boar's head, artichokes, asparagus, cabbages. Two of these last, the large white headed sort, and the rough green savoy, are done so imitatively, that they might, at a little distance, deceive the eye. It is impossible not to imagine to one's self, the kind and playful merriment of the feast, where these dishes made their first appearance.—*Notes and Reflections during a Ramble through Germany.*

INTERNAL IMPROVEMENT.

IMPROVEMENT OF THE INTERNAL RESOURCES OF MARYLAND.

[Though few states in the Union enjoy such eminent natural advantages as Maryland, as respects climate, position, and the means of transportation to market by navigable waters that flow by almost every one's door; yet no state is in the way of gaining more by public artificial works, to conduct into her lap the products of other states. Her local divisions, however, with other causes, have hitherto had a most inauspicious effect, in preventing a concentration of opinion and of resources upon any practicable work. Projects were multiplying, and the sentiments of the people, even in this city, were becoming more various, until the danger had become apparent, that those who ought to enlighten the public mind; and those who must supply the means, would be formed into controversial parties, and become so far committed in support of their particular plans, that nothing could be done. In this state of things, our zealous and indefatigable Mayor was requested by the people to appoint two citizens of sound judgment from each ward, to take the whole subject into view, and to endeavour to present some practicable plan for securing to our city and state all the benefits to be procured by an improvement of the advantages which Providence has placed within her reach. That committee, with an alacrity which does them credit and shows that they were fully sensible of the importance of the present crisis to the future destinies of Baltimore, took the work in hand without fear or delay, and presented a report for the consideration of the citizens. The proceedings of the meeting and the plan proposed by the committee, will be found in the following sketch, which we take from the American.]

The meeting at the Exchange yesterday, to consider the Susquehanna Canal project which had been recommended by the committee of twenty-four, was large and respectable, and its proceedings characterized by a unanimity of sentiment which augurs most favourably for their accomplishment of the scheme of internal improvement which will impart new life and vigour to the energies, the commerce, and the manufactures of Baltimore. Between ten and eleven, the Mayor rose and addressed the meeting in a concise and distinct manner upon the occasion for which it had been convened—stating the origin of the appointment of the committee and the duty which had been delegated to them. He then proposed that the meeting should be organized by

the appointment of a chairman and secretary, in order that it might proceed to the consideration of the report and project of the committee, as already published in the daily journals of the city. Upon the motion of a citizen, the Mayor was called to the chair, and William Frick, Esq. appointed Secretary. By a vote of the meeting, the reading of the first part of the report of the committee was dispensed with, on account of its length. The Secretary then proceeded to read the plan recommended by the committee, which is in these words:—

That a company shall be incorporated, to be styled *The Pennsylvania and Maryland Canal Company*; and for the purpose of constructing a Canal from the eastern termination of the Pennsylvania State Canal to the head of tide in the Susquehanna river, and from said Canal to the city of Baltimore. That the proposed Canal shall be divided into two sections, the first to be called the *Northern section*, and to begin at the eastern termination of the Pennsylvania State Canal, and to terminate at the head of tide; and the second to be called the *Southern section*, and to begin in connection with said Northern section, and to terminate at or within the city of Baltimore.—That in the acts incorporating said company, provision be made for the appointment of an equal number of Commissioners on the part of each of the states of Pennsylvania and Maryland, not less than five on the part of each state, who shall be empowered to locate the route of said Canal to tide, and also to take subscriptions of stock in said company in their respective states. That in said acts provision be also made for surveys under the direction of said Commissioners, of all the practicable routes for said Northern section, but that in the location of said section, the said Commissioners shall by said acts be restricted to some route for the same which will admit of the possible construction of a Canal to Baltimore in connection with said Northern section, and that as between several routes for said Northern section, all admitting of the possible construction of such a Canal in connection, they shall also be restricted by said acts of that route which will present the greatest facilities in the descent to tide, and along which said Canal can be conducted at the least expense. That the Northern section shall be commenced at within two, and completed within five years after the passage of said act, otherwise the said act shall be null and void. And that the said Northern section shall be completed by the Company before the Southern section is commenced. That the Southern section shall be commenced within one year after the completion of the Northern, and shall be completed within four years thereafter, or otherwise the state may make such Southern section herself, or may grant the privilege of making the same to any other Company. That the capital stock of said Company shall be \$2,500,000, and that so soon as \$800,000 of such sum shall have been subscribed, the said Company shall be incorporated, and shall be invested with all the powers necessary to the construction of said Canal. That the state of Maryland be requested to subscribe \$500,000 of the stock of said Company, upon the condition that the aggregate of the sum subscribed by others and said sum of \$500,000 be equal to the estimate of the cost of said Northern section, as made by the Engineer or Engineers locating the same under the direction of the Commissioners; and that the Governor of the state, to whom proof is made of the subscription of the residue of such sum by other persons, and to whom such estimates are certified by the Engineer or Engineers thus making such estimate, shall thereupon direct the treasurer of the Western Shore to subscribe said sum of \$500,000. That the state of Pennsylvania be requested to subscribe \$500,000 in order to the construction of the Northern section of the Canal; upon the condition that such a subscription be considered solely as a subscription towards the

construction of said section, and that no part of the same or the proceeds thereof be applied to the construction of the Southern section without her express assent; and that the tolls arising from said Northern section be a pledged fund for the payment to her of such a portion of the nett profits arising from said section as her said subscription may be of the whole cost of said section. That the Corporation of the city of Baltimore be requested to subscribe \$500,000 to said Company.

The question was then stated upon the adoption of the report and recommendations, and carried unanimously.

The Secretary then proceeded to the reading of the resolutions appended to the report of the committee, and the question having been stated upon each resolution separately, they were also unanimously adopted. They are in these words:—

Resolved, That the Mayor be, and he is hereby requested, to lay a copy of the report of this committee before the City Council, in order to their cooperation in carrying its recommendation into effect.

Resolved further, That the Mayor and City Council be and they are hereby requested to appoint a committee, whose duty it shall be to prepare a law to carry into effect the above recommendations, and to submit the same to the legislature of Maryland.

Resolved further, That the Mayor and City Council be, and they are hereby also requested, to appoint a committee, whose duty it shall be, when any such law has been passed by the legislature of Maryland, to repair to Harrisburg and to solicit the assent of the legislature of Pennsylvania to such law—and the subscription requested on the part of said state—the appointment of Commissioners on her part to take the stock of said Company and locate said Canal—and, in general, the adoption of all such measures as may be necessary to carry such law into effect.

A vote of thanks to the committee, for the able manner in which they had discharged the duty confided to them, was also passed, when the meeting adjourned.

Since the foregoing was prepared, we have received the official account of the proceedings, as follows:

PUBLIC MEETING.

Baltimore City Exchange.

In pursuance of the invitation of the Mayor of the city, the citizens assembled this day, the 11th of January, 1827, at 10 o'clock, in order to take into consideration the report and resolutions of the committee appointed by resolution of the meeting of the citizens on the 22d December last, JACOB SMALL, Esq. Mayor, was called to the chair, and WILLIAM FRICK appointed Secretary—When the said report and resolutions were submitted to the meeting, and were unanimously adopted.

It was thereupon moved, and carried unanimously, that the thanks of the meeting be presented to the committee for the able and satisfactory report presented by them. And the meeting then adjourned. JACOB SMALL, Chairman.

W. FRICK, Secretary.

SCHUYLKILL NAVIGATION COMPANY.

[From the last annual report of the President and Managers of the Schuylkill Navigation Company, we make the following extracts.]

The President and Managers of the Schuylkill Navigation Company, in presenting to the stockholders their annual report, have much satisfaction in being able to exhibit a very rapid increase in the usefulness and productiveness of a work which has been sustained by the stockholders through every vicissitude, until the period has arrived which holds out every prospect of a speedy remuneration for the advance of their capital.

It will be seen by the statements accompanying this report, that the increase of the tolls, during the past year, has nearly trebled those of the preceding, and there can be no reason to doubt of a very great progressive advance. After the completion of a work, such as that of the Schuylkill Navigation, time is required for trade to leave its accustomed channels, and to direct itself into new ones; as the superior advantage of the new one, however, becomes every day more apparent, the resort to it increases in proportion.

In the last annual report, the trade of the Susquehanna was alluded to as likely to find its way to market by the route of the Schuylkill Navigation; experience has tested the correctness of this assertion; and as increased facilities to this trade have been created during the past year, by the erection of new warehouses at Mount Carbon, and by men of large capital embarking in the business, a more extensive and constant increase to this trade may be looked for.

The great increase, too, in the consumption of anthracite coal, for domestic as well as manufacturing purposes, offers a fair prospect of trade in that article, the demand for which will probably only be limited by the means of supply.

The increase in the return trade has exceeded that of the descending navigation, and forms a source of revenue not much calculated upon at an earlier stage of our work; it promises, however, to be of great importance; for as the population of the country bordering on the navigation increases, their demand of supplies must also increase; and as much of the trade which has heretofore descended the Susquehanna will find its way here, the proceeds, instead of being laid out in our neighbouring cities, will be laid out in Philadelphia, and find the way back by the channel it descended.

No. 3.—Statement of articles which passed up the Schuylkill Navigation, in 1826.

Store goods,	tons, 2,670
Iron and cast iron,	198
Plaster of Paris,	908
Lumber,	776
Empty flour casks, kegs and hhds.	18
Litharge,	11
Sand,	72
Household furniture,	39
Melons and other vegetables,	22
Bricks,	108
Oysters and sea fish,	29
Marble,	10
Machinery,	7
Virginia coal,	1,478
986 logs	500
Total,	6,843

No. 4.—Statement of articles which passed down the Schuylkill Navigation, in 1826.

Coal,	tons, 16,767
Flour, 21,245 barrels,	2,023
Grain and seed,	724
Live hogs,	8
Whiskey,	420
Iron ore,	2,541
Butter and lard,	41
Marble and stone,	1,207
Potash,	8
Nuts,	3
Tallow,	6
Iron,	122
Wood and bark,	54
Lumber,	1,492
Potatoes,	16
Fruit,	1
Store goods,	128
Total,	25,561

RAIL ROADS.

Extract of a letter from a gentleman of this city, now in Europe, to his friend, dated

Edinburgh, Nov. 1, 1826.

"On the subject of Rail Roads, I find the opinion obtains that they will do where water is not attainable, and then only for short distances; or where, as between Liverpool and Manchester, the transit of goods is so immense, as to exceed the powers of a canal, and that too on a dead level. In conversing with one of the most intelligent gentlemen of Birmingham, connected with iron works, he said that nothing but the absolute madness which prevailed last year, could have got up the Rail Road 'bubbles,' which have so generally exploded, not for want of money, but from the absolute certainty that they could not do any good." [Poulson's Adv.

LADIES' DEPARTMENT.

ON FEMALE EDUCATION.

Extract to the Editor, dated Columbia, S. C., Dec. 23, 1826.

Is it not strange that the subject of female education should yet, and in this country, be argued as if it were not agreed upon on all sides? I really cannot see what addition is wanted to the education females receive generally in this country. Girls are as well educated as boys. They all equally go to school, and if the former do not learn Latin, Greek and the mathematics, they are generally as well acquainted with the grammar and orthography of their own language as the boys. It is true many of them are made to lose a great deal of precious time in learning to thrum on the piano for several years, which high accomplishment they most generally give up when they have left school, or at least as soon as they are married. It is the acme of folly to oblige a girl who has no taste for music, thus to waste her time. If I am to judge from the advertisements of our female schools in this place, and we have three very good, I may say excellent ones, there is no ground of complaint; unless it should be thought necessary that they learn the higher branches of mathematics, gunnery, fortifications, military tactics, law and politics, &c. &c. If they learn tolerably well what the masters profess to teach them, they will do, as they actually do, very well.

MISS LIVERMORE.

Our readers may have observed in our columns recently, notices of Miss Livermore's intention to preach at the capitol and elsewhere. Our engagements have not allowed us to attend her preaching, had we wished to do so. Those who have heard her, speak highly of her natural gifts, and some are even enraptured by her eloquence. Among the latter is the esteemed lady who is the author of the following letter, of which we have been allowed to take a copy for publication. It is addressed to the daughter of the writer, who resides in a distant part of the country. [Nat. Int.

Washington, Jan. 9, 1827.

My Beloved Child—I witnessed a scene yesterday, so novel and impressive, that I cannot forbear attempting a description of it. I say attempting, for the sensibilities were more strongly affected than the senses, consequently a just delineation is very difficult. It had been rumored for some weeks, that a woman of considerable pretensions had solicited in vain for permission to preach in the Representatives Hall at the capitol. So you see, after all the professions of veneration for our sex, made by mankind, when tested by their acts, they say, "What good thing can come out of Nazareth?"

Thanks to the Christian Pastors of Georgetown they invited her to their churches, from whence

fame of her eloquence spread through the city—curiosity prevailed over illiberal prejudice, and she was invited to preach at the capitol. We attended at an early hour, and found the hall, lobby, and gallery so completely filled that it was almost impossible to get admission; and I am told the avenue itself was full of persons excluded.

When I looked round and saw the numerous audience, greater than I had ever seen on any former occasion, I trembled for the yet unseen female who was to address them. At length she appeared, attended by a friend. Her figure is good, her height somewhat above mediocrity, her face pale, perhaps some would say plain, but pleasing, and indicative of great serenity and goodness. They were both dressed in a style so simple and neat, you would have taken them for Quakers. She ascended the Speaker's chair, and her friend seated herself by her. She commenced, in the usual manner, by prayer and singing. She then read the 112th psalm in a voice somewhat hurried and tremulous, and selected her text from 2d Samuel, 23d chap. part of the 3d and all of the 4th verses—"He that ruleth over men must be just, ruling in the fear of God. And he shall be as the light of the morning, when the sun riseth, even a morning without clouds; as the tender grass springing out of the earth by clear shining after rain."

The President and many members of Congress were present. From her text, you will readily perceive her address was intended principally for the rulers of the nation. But she embraced the whole multitude—the rulers of schools—the rulers of families—and, as individuals, the rulers of our passions.

Her language was correct, persuasive, and, judging by my own feelings, the profound attention and sympathy of the audience, extremely eloquent. Many wept even to sobbing. C. first yielded to the general impression, and even I, although unused to the melting mood, I, who thought my heart was seared by affliction, and my eyes dried by weeping, found that heart relenting, and those eyes dissolving in a trickling thaw.

Judging, as I said, by my own feelings, and I have no other test, I should say she is the most eloquent preacher I have listened to since the days of Mr. Waddell.

But no language can do justice to the pathos of her singing. For when she closed by singing a hymn, that might with propriety be termed a prayer, in which she asks the divine perfections of each sacred character recorded in scripture, her voice was so melodious, and her face beamed with such heavenly goodness, as to resemble a transfiguration, and you were compelled to accord them all to her. I could have listened from morn till noon, and from noon till dewy eve of a summer's day. It savoured more of inspiration than any thing I ever witnessed; and to enjoy the frame of mind which I think she does, I would relinquish the world. Call this rhapsody if you will: but would to God that you had heard her! I think you would have felt as I did, and I may add, as I now do.

ANECDOTE.

When Dr. Sheridan called one morning on Miss M'Fadan, to take his leave of her for a few days; the young lady asked, in a tone that well expressed more than the words which accompanied it, how long he intended to stay away? To which he immediately replied—

You ask how long I'll stay from thee:
Suppress those rising fears:
If you should reckon time like me,
Perhaps ten thousand years.

This reminds us of an elegant and complimentary tetrastric attributed to the Doctor's illustrious paternal namesake, the late R. B. Sheridan, who hav-

ing on one occasion, staid—not away, but too long with his fair one, exclaimed at parting—

Too long I've staid—forgive the crime,
Like moments flew the hours;
How lightly falls the foot of time,
Whene'er he treads on flowers.

(From late foreign journals received at the office of the National Gazette.)

FAITHLESS NELLY GRAY,

A PATHETIC BALLAD.

Ben Battle was a soldier bold,
And used to war's alarms;
But a cannon ball took off his legs,
So he laid down his arms!

Now as they bore him off the field,
Said he, "let others shoot,
For here I leave my second leg,
And the 'Forty-second Foot!'"

The army-surgeons made him limbs;
Said he, "They're only pegs;
But there's as wooden members quite
As represent my legs!"

Now Ben he loved a pretty maid,
Her name was Nelly Gray;
So he went to pay her his devoirs,
When he'd devour'd his pay!

But when he call'd on Nelly Gray,
She made him quite a scoff;
And when she saw his wooden legs,
Began to take them off!

"O Nelly Gray! O Nelly Gray!
Is this your love so warm?
The love that loves a scarlet coat
Should be more uniform!"

Said she, "I loved a soldier once,
For he was blithe and brave;
But I will never have a man
With both legs in the grave!"

Before you had those timber toes;
Your love I did allow;
But then, you know, you stand upon
Another footing now!"

"O Nelly Gray! O Nelly Gray!
For all your jeering speeches,
At duty's call I left my legs
In Badajos's breaches!"

"Why then," said she, "you've lost the feet
Of legs in war's alarms,
And now you cannot wear your shoes
Upon your feats of arms!"

"O false and fickle Nelly Gray!
I know why you refuse;
Though I've no feet, some other man
Is standing in my shoes!"

I wish I ne'er had seen your face;
But now a long farewell!
For you will be my death—alas!
You will not be my Nell!"

Now when he went from Nelly Gray,
His heart so heavy got,
And life was such a hurthen grown,
It made him take a knot!

So round his melancholy neck,
A rope he did entwine,
And, for his second time in life,
Enlisted in the Line!

One end he tied around a beam,
And then removed his pegs—
And, as his legs were off, of course
He soon was off his legs!

And there he hung till he was dead,
As any nail in town;
For though distress had cut him up,
It could not cut him down!

A dozen men sat on his corpse,
To find out why he died;
And they buried Ben in four cross-roads,
With a stake in his inside!

MISCELLANEOUS.

WOOLLEN MANUFACTURES.

In the House of Representatives, Mr. Mallary, from the Committee on Manufactures, to which had been referred petitions from various parts of the United States, upon the subject of woollen manufactures, reported the following bill:

"A Bill for the alteration of the Acts imposing duties on imports.

"Sect. 1. *Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled,* That, from and after the first day of August, one thousand eight hundred and twenty-seven, in lieu of the duties now imposed by law on the manufactured articles hereafter mentioned, imported into the United States, there shall be charged and paid the duties chargeable thereon, in the following manner:

"First. All manufactures of wool, or of which wool is a component part, except worsted stuff goods and blankets, whose actual value at the place whence imported shall not exceed forty cents per square yard, shall be deemed and taken to have cost forty cents the square yard, and be charged with the present duty accordingly.

"Second. All manufactures of wool, or of which wool shall be a component part, except worsted stuff goods and blankets, whose actual value at the place whence imported shall exceed forty cents the square yard, and shall not exceed two dollars and fifty cents the square yard, shall be taken and deemed to have cost three dollars the square yard, and charged with the present duty accordingly.

"Third. All manufactures of wool, or of which wool is a component part, worsted stuff goods and blankets excepted, whose actual value at the place whence imported shall exceed two dollars and fifty cents the square yard, and shall not exceed four dollars the square yard, shall be taken and deemed to have cost four dollars the square yard, and charged with the present duty accordingly.

"Sect. 2. *And be it further enacted,* That all unmanufactured wool, now chargeable with a duty of thirty per cent. ad valorem, shall, from and after the first day of June, eighteen hundred and twenty-eight, be charged with a duty of thirty five per cent. ad valorem, and from and after the first day of June, eighteen hundred and twenty-nine, be charged with a duty of forty per cent. ad valorem. And all wool unmanufactured, whose actual value at the place where imported, shall exceed ten cents per pound, and not exceed forty cents per pound, shall be deemed and taken to have cost forty cents per pound, and be charged with the duty as in this section is before provided.

"Sect. 3. *And be it further enacted,* That all imported wool, on the skin, shall be chargeable with a duty of thirty per cent. ad valorem, including the value of the skin, until the first day of August, eighteen hundred and twenty-seven, when a duty of thirty-five per cent. ad valorem, shall be charged and paid until the first day of August, eighteen hundred and twenty-eight; after which there shall be charged and paid on the same a duty of forty per cent. ad valorem."

The bill was twice read, and committed to the Committee of the Whole on the state of the Union.

TARIFF—CUSTOM HOUSE CHARGES.

Having conversed with many gentlemen on the subject of the Tariff, I am led to believe that few people are at all acquainted with the mode of calculating the duties at our Custom houses; and for such I hand you the particulars of an invoice of broadcloths, with the duty and charges of importation. As the example given below is a real invoice, or bill of parcels, with the export charges, which has passed the Custom House, the estimates may be implicitly relied upon. It will be observed, that in the subjoined example, the commission for buying is two and a half per cent., and that on the nett amount; whereas, in many cases, five per cent. is charged, which would necessarily increase the amount of the duty:

2 pieces, 41 yds. blue cloth, 10s	-	20/ 10 0
2 " 45 do. do. 20s	-	45 00 0
2 " 40 black do. 15s	-	30 00 0
1 " 18 grey do. 5s	-	4 10 0

100 00 0

CHARGES.

Case, papering and pressing,	1/ 5 6
Carriage to Liverpool,	10 3
Storage, cartage, town dues, &c.	4 6
Insurance 14 per cent. and policy duty 2s 6d,	1 7 6
Commission for effecting insurance	10 0
Commission for buying, 2½ per ct.	2 10 0

6 7 9

106/ 7 9

Or,

\$472 83

Deduct Insurance on which duty is not charged,

4 56

\$468 27

Add 10 per cent., which is added to every invoice, and the duty is then estimated,

46 82

\$515 09

Duty 33½ per cent.,

\$171 69

From the foregoing, it is perceived that the duty on 100/ sterling paid to the English manufacturer, or \$444.44, for an invoice of cloths, is \$171 69, or 38 per cent. on the invoice cost, in place of 33½, as generally supposed.

Again, let us take the amount paid in England—Prime cost and charges, say

\$472 83

On which add 4 per cent. for freight, loss of time, &c. in getting the goods to market,

18 91

The average premium on exchange between this and England, since the late tariff went into operation, is at least 8 per cent.; or

37 82

529 56

To which, if the duty be added, of

171 69

The product will be

\$701 25

From which it appears, if all the unavoidable charges on an importation be added to the first cost, it is not less than 65 per cent., and that is the *real advantage* which the American manufacturer of woollen goods has over the English. And yet, our manufacturers are discontented and clamorous for an increase of duties.

VERITAS.

Richmond, Dec. 22, 1826.

ENGLISH SHIPPING LOST IN TEN YEARS.

The following is an account, made up from Lloyd's list, of the number of ships and vessels belonging to the British empire, which have been lost, stranded,

and got off, captured and recaptured, from the year 1789 to 1800.

Years.	Lost.	On shore.	Got off.
1789	163	61	7
1790	167	47	11
1791	218	82	8
1792	195	59	11
1793	201	88	5
1794	246	64	4
1795	222	42	2
1796	181	44	1
1797	193	59	6
1798	165	61	6
1799	210	46	3
1800	229	49	6

2385 652 70

652 on shore.

3037

70 got off.

2967 lost by perils of the sea.

Years.	Captured.	Recaptured.
1793	857	62
1794	701	86
1795	646	56
1796	534	67
1797	751	135
1798	447	91
1799	451	86
1800	457	122

4344 705

705 recaptured.

3639 total lost by capture.

2967 total lost by perils of the sea as above.

6606 grand total of ships lost in 10 years.

Such is the result furnished by the entries at Lloyd's; but there is no doubt that many ships belonging to the British empire have been lost and captured, which have not been reported to Lloyd's.

PIGEONS.

By the French law, the lord had a right to the young pigeons of his vassal, except in the March flight. Hartib supposes that there were, in his time, in England, 26,000 dove houses, and allowing 500 pair to each house, and four bushels to be consumed yearly by each pair, it makes the loss of corn in a year, 13,000,000 bushels. In Persia, the pigeons are trained to kill the wild ones, of which amusement they are so fond, that a Christian is not permitted to keep any; and Tavernier, who mentions this, adds, that some Christians have become Mahometans, merely to be entitled to this privilege.

SPORTING OLIO.

MARSK.

The brown horse **MARSK**, foaled in 1750, and so named from the place where he was bred, was the property of John Hutton, Esq. of Marsk, Yorkshire, who afterwards disposed of him to his royal highness, the Duke of Cumberland, was got by Squirt, son of Bartlet's Childers, out of the Ruby mare, which was from a daughter of Bay Bolton and Hutton's Black Legs—Fox Cub—Coneyskins—Hutton's Grey Barb—a daughter of Hutton's Royal Colt—a daughter of the Byerley Turk, from a Bustler mare. This is one of our highest bred pedigrees, going back to the reign of Charles I. In the year 1750, the Duke made an exchange of a chestnut Arabian with Mr. Hutton, for the colt, which his royal highness afterwards named **Marsk**.

Marsk must be deemed a capital racer, since he beat **Brilliant**, but he was an uncertain horse. He started but five times, and no where, we believe, but at Newmarket. Being in low estimation as a stallion, in the Duke's stud, he was sold at his royal highness' sale at Tattersall's, to a farmer, for a trifling sum; and in 1766, as has been before observed, covered country mares and foresters, at half a guinea; when Mr. Wildman, finding his intelligence respecting the Eclipse colt, correct, thought it advisable to get into his possession the sire of such a colt, and purchased **Marsk** of the farmer, for twenty pounds, who professed himself happy to be so well rid of a *bad bargain*. Of **Marsk**'s subsequent advance in fame and price, as a stallion, we have spoken before. He has been styled the "prince of horses," and his fame will be handed down to as late a posterity as the *fame* of his princely owner. It is sufficient to say that, besides so many other racers of high reputation, he was the sire of Eclipse, Shark, Pretender, Honest Kitt, Masquerade, Leviathan, Salopian, Pontac. Shark won sixteen thousand and fifty seven guineas, in matches, sweepstakes, and plates; beating the best horses of his day, at their own play, whether speed or stoutness.

Marsk seems to have had the caprices of fortune imparted to him, as an inheritance from his sire. Squirt, after running with great repute, became a stallion in Sir Harry Harpier's stud, who esteeming him of no worth, ordered him to be shot. As the huntsman was leading him out to the dog kennel, he was begged off by the stud groom; and afterwards got **Marsk**, Syphon, Prat's famous Old Mare that bred Pumpkin, Maiden, Purity—with many others Syphon got Sweetwilliam, Sweetbriar, Tandem, Daisy, and others. These curious and interesting facts, which might be greatly multiplied, surely cannot fail of having a certain effect upon the minds of those, who breed and train horses for the course. But of such considerations, we in vain, reminded O'Kelly and others, immediately before Shark was taken from this country, for the paltry sum of one hundred and thirty pounds.

[Sportsman's Rep.

DUCK SHOOTING.

[The Editor of the Manufacturers' and Farmers' Journal, in copying the article on duck shooting from the Elkton Press, republished in this paper, introduces it with the following observations:]

"The writer of the following is evidently a keen sportsman, and his description of duck shooting will be read with a good relish by his brother craft. He is, however, mistaken, in supposing this method of shooting to be peculiar to Maryland. We have practised it in boyhood on the bays of Massachusetts, and it has been in use among the gunners of that region, and we presume elsewhere, since time, whereof the memory of man runneth not to the contrary. A red silk handkerchief, tied to the end of the ramrod, and slowly and steadily waved backwards and forwards, will, when the ducks are in a good humour, produce the same result."

EDITORIAL CORRESPONDENCE.

Hanover, near Wilkesbarre, Jan. 2, 1827.

Dear Sir—I inclose herewith two small packets of seed, one of which I will thank you to forward to William Bowly, Esq., to whose good lady its contents will, I expect, be very acceptable; the other is for your own acceptance; and with respect to the seeds, I can venture to assure you, that both are the very best of their kinds. Of the melon, I had the good fortune to obtain its seed, in the first instance, from a friend in England, whose gardener is skilled in the raising of fine fruits; and last summer I succeeded, for the first time, in raising an abundance of fine fruit from this seed, and at a distance from all

other vines, so that there is good reason to believe that the seed I send you is perfectly genuine and unmixed. The balsam is also particularly fine and double, and when planted out singly in the flower border, will grow to a considerable size, and display much beauty and variety of colours for a long time; and if planted at two different seasons, (say, 1st May and 1st June,) the latter will form a succession that will continue in flower until there is frost.

I have more of the melon seed to spare, sufficient for distribution among some of your subscribers; and if you will inform me the weight to which I must confine myself in sending you a packet, I will in conformity thereto send you a further supply.

I wish to get a thimble full of some very choice tobacco seed, that will produce tobacco suitable for good segars; the Maryland yellow is probably a good sort for this purpose. I shall feel obliged, if you will favour me with a small packet of such kind as will best answer my object.

With great respect, I remain, dear sir,

Very truly yours,

J. S. SKINNER, Esq CHAS. STREATER.

DOMESTIC WINE.

Extract to the Editor, dated Columbia, S. C., Dec. 23, 1826.

You, no doubt, remember that I made some wine last August, which I judged would be very good. It has turned out as I judged. It was found so good, though only three months old, as to sell readily at two dollars per gallon, at which price, I firmly believe I could have sold in three weeks time four or five thousand gallons if I had had it. I was assured by several persons of the most respectable in the state, that experienced old Madeira drinkers pushed the Madeira aside to drink Palmyra. This is very flattering, and is very encouraging. I had intended to send you at least half a dozen bottles of it; but I unfortunately lost almost all I had reserved for myself. I am very respectfully, dear sir,

Your obedient servant, N. H.

N. B. Dr. R. is so well satisfied with my success with the grape, that he assured me it was his firm determination to have two hundred acres planted in vines in ten years.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 19, 1827.

AGRICULTURAL SOCIETY OF MARYLAND.

Baltimore, Jan. 11, 1827.

At a meeting of the Trustees of the Agricultural Society of Maryland, at Mr. J. B. Morris's, were present—George Howard, President, Richard Caton, John B. Morris, Col. N. Bosley, Jacob Hollingsworth, Samuel W. Smith, Allen Thomas, Geo. Cooke, James Swan, J. S. Skinner, Corresponding Secretary, James Cox, Treasurer.

Mr. Caton, from the committee to whom was referred the subject of memorializing Congress to allow the importation of rock salt free of duty, having stated the purport of the memorial, it was

Resolved, That the same be deposited in the hands of the Corresponding Secretary, to be by him forwarded to one of our representatives in Congress.

A memorial to the legislature of Maryland, on behalf of the Maryland Academy of Sciences and of the Agricultural Society of Maryland, praying for the passage of a law authorising a geological and mineralogical survey of the state, was read and approved. Whereupon it was

Resolved unanimously, That said memorial be signed by the President on behalf of the Board.

In testimony of their unabated respect for their President, Gen. Charles Ridgely, of Hampton,

now a member of the Board, it was agreed that the next meeting be held at his residence on the 22d of Feb., the birth-day of the illustrious Washington.

Test, J. S. SKINNER, Sec'y pro. tem.

Any gentleman disposed to unite with two others in the purchase of an IMPROVED SHORT HORN BULL, for their joint use, will please give notice to the Editor of the American Farmer.

MARKETING.—Butter, per lb. 25 a 31½ cts.; Beef, cwt. \$5; Pork, \$4.25; Veal, lb. 8 cts.; Mutton, 6 cts.; Potatoes, bush. 75 cts.; Eggs, doz. 18½ cts.; Turkeys, 75 cts. a \$1; Geese, 37½ a 50 cts.; Chickens, pair, 25 a 37½ cts.; Turnips, per bush. 37½ a 50 cts. Hay, per ton, \$20; Rye Straw, do. \$14; Chop Rye, cwt. \$1.75; Oats, bush. 45 a 50 cts.; Corn, in ears, \$3.50 per bbl; Cut Straw, bush. 5 cts.

PRICES OF STOCKS.

(Reported for the American Farmer, by MERRYMAN & GITTINGS, Stock and Exchange Brokers.)

Baltimore, Jan. 19, 1827.

BANK STOCKS.	par value.	present price.
U. States' Bank Stock, per share,	\$10	117 a 118
Bank of Maryland, do.	300	227 w
Bank of Baltimore, do. (div. off.)	300	342
Union Bank Maryland, do. do.	75	75
Mechanics' Bank,	9	9.50
Franklin Bank,	20	25.25
Commercial and Farmers' Bank,	20	26
Farmers' and Merchants' Bank,	50	54.25
City Bank, w	15	2.80
Marine Bank,	25	27.25
Farmers' Bank of Maryland, w	50	53 w
CITY STOCKS.		
Corporation 6 per cent. redeemable after 1836, (div. off.)	100	110
Do. 5 per cent. redeemable in 1832, (div. off.)	100	101
Penitentiary 5 pr. cent. stock; (none in market.)	100	
Museum, 8 per cent. (no demand.)		
Masonic Hall, 6 per cent.	100 par & int.	
Annuities, or Ground Rents, :	6 to 10 per cent.	
ROAD STOCKS.		
Reister's Town, . . (div. off.) f. s.	20	10.25
York, do. f. s.	20	7.25
Frederick, do. f. s.	20	11.75
Washington and Baltimore,	50	31.50
Baltimore Water Company Stock, per share, (div. off.)	50	93
Union Manuf. Co. Stock, per share,	50	14 w
Gas Stock,	100	115
Temascaltepec Mining Co's, per share,	600	850
Havre de Grace Turnpike 6 per cts. par & interest		
U. STATES' STOCK.		
Six per cent. 1813, (div. off.)	100	101½
—, 1814, do.	100	102½
—, 1815, do.	100	104
Three per cent. do.	100	80
Four and half per cent. do.	100	101
Five per cent. do.	100	107

W., wanted—f. s., for sale, by Merryman & Gittings.		
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Observations on Gentleman Farming—Agricultural Society of Lower Virginia—On the management of Sheep, &c.—Governor Lincoln's Farm—Colour of Cattle—Boring for Water, in Milton, Pa.—German Kitchen—Improvement of the Internal resources of Maryland, Publick meeting at Baltimore on the Susquehanna Canal—Schuykill Navigation in 1826—Rail Roads—On Female Education—Miss Livermore—Anecdote of Sheridan—Poetry, Faithless Nelly Gray—Woollen Manufactures—Tariff and Custom house Charges—English Shipping lost in ten years—Pigeons—Celebrated horse Mark—Duck Shooting—Domestic Wine—Proceedings of Trustees of the Agric. Soc'y of Maryland.		

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.	RETAIL.
		from	to
BEEF, Baltimore Prime, bbl.	8 50	9 00	
BACON, and Hams,	6	10	9 12
BEEF-WAX, Am. yellow	29	30	50
COFFEE, Java,	16	16½	20 22
Havana,	14	16	20
COTTON, Louisiana, &c.	11	14	
Georgia Upland,	10	11½	
COTTON YARN, No. 10,	28		
An advance of 1 cent each number to No. 18.			
CANDLES, Mould,	13	16	16 18
Dipt,	12	14	16
CHEESE,	8½	12	19 15
FEATHERS, Live,	30	32	37
FISH, Herrings, Sus.	bbl. 2 37½		
Shad, trimmed,	5 50	6 00	
FLAXSEED,	bush 1 00	1 10	
FLOUR, Superfine, city,	bbl. 5 50	6 75	
Fine,	5 25	6 50	
Susquehanna, superf.			note
GUNPOWDER, Balti.	25 lb 5 00	5 50	
GRAIN, Ind. corn, yellow	bush 58	60	
white	58	60	
Wheat, Family Flour,	1 05	1 10	
do. Lawler, & Red, new	1 00	1 10	
do. Red, Susque.	1 05	1 10	
Rye,	75		
Barley, Eastern	1 22	1 25	
Do. country	90	1 00	
Clover Seed, Red	bush 4 50	5 00	5 50
Ruta Baga Seed,	lb. 87		1 00
Orchard Grass Seed,	bush 3 50		
Mangel Wurtzel Seed,	1 25	1 50	note
Timothy Seed,	4 00	5 00	
Oats,	45	50	
Beans, White,	1 25	1 50	2 00
HEMP, Russia, clean,	ton 260		
Do. Country	120	200	
HOPS, 1st sort, (1826)	lb. 18		25
HOGS' LARD,	9	10	12
LEAD, Pig	6½	6½	
Bar	7½	8	
LEATHER, Seal, best,	21	23	32
MOLASSES, sugar-house		50	
Havana, 1st qual.	30	32	37½
NAILS, 6a20d.	lb. 6½		9
NAVAL STORES, Tar,	bbl. 1 50	1 62½	
Pitch,	1 75		
Turpentine, Soft,	1 75		
OIL, Whale, common,	gal. 33	34	40
Spermaceti, winter	75	80	88
PORK, Baltimore Mess,	bbl 11 50		
do Prime,	9 00		
PLASTER, cargo price,	ton. 3 50		
ground,	bbl. 1 50		
RICE, fresh,	lb. 3½	3½	5
SOAP, Baltimore White,	lb. 12	14	18
Brown and yellow,	5½	8	10
WHISKEY, 1st proof,	gal. 53	54	50
PEACH BRANDY, 4th pr	75	1 00	1 25
APPLE BRANDY, 1st pr	31		50
SUGARS, Havana White, c. lb.	12 50	13	14 15
do. Brown,	10 00	10 50	
Louisiana,	7 25	9 20	10 11
Loaf,	19	22	20 22
SPICES, Cloves,	70		1 00
Ginger, Ground,	7	12	12 18
Pepper,	15		25
SALT, St. Ubes,	bush 43	47	75
Liverpool ground	54	56	75
SHOT, Balt. all sizes,	clb. 8 50		12
WINES, Madeira, L. P.	gal. 2 50	3 00	3 50 4
do. Sicily,	1 10	1 15	1 50 2 00
Lisbon,	1 05	1 10	1 50 1 75
Port, first quality,	gal. 1 65	1 85	2 50
WOOL, Merino, full bl'd	lb. 30	35	
do. crossed,	20	22	
Common, Country,	18	22	
Skinner's or Pulled,	20	25	

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RURAL ECONOMY.

TAPIA.

Georgetown, D. C., Jan. 1827.

J. S. SKINNER, Esq.

Sir.—I have been much gratified and instructed by perusing the volumes of your excellent paper, and was particularly struck with an article in the 1st number of the 4th volume, headed "*Pisé, or the art of building strong and durable walls, to the height of several stories, with nothing but earth, or the most common materials—drawn up and presented to the Board of Agriculture, by Henry Holland, Esq.*" The resemblance of this mode of construction to that of building with *Tapia*, or *Tabby*, as it is termed in South Carolina and Georgia, and which I do not see noticed in any part of your work, has induced me to give a description of the latter, in order that you may insert it in your paper; as I believe the knowledge of the art of making *tapia* buildings will be useful to some of your numerous readers. We will therefore head it in regular order under its proper title.

Tapia, or the art of constructing edifices and walls with a composition of shells, lime and sand—or with small stones, lime and sand.

Tapia is of very ancient origin. It is with this material that the castles and walls of Algiers, Tunis, and other cities on the coast of Barbary are constructed. In South Carolina and Georgia there are still remaining buildings of this kind which were erected by the English before the American revolution. The sea battery of old Fort Johnson, in the harbour of Charleston, and the *horn work* in the rear of that city, were before the last war plainly to be seen, and so much of these works as were permitted to remain, were firm and strong. The battery at Fort Johnson was blown up and the fragments are still seen lying in the sea like great rocks, having resisted for half a century the lash of that raging element. General Oglethorpe, in about the year 1736, to defend himself against the Spaniards, erected a fort, or fortified cantonment, at Frederica, on the coast of Georgia, composed of a castle, or citadel and barracks, in the form of a square; the walls of the citadel and barracks were standing in 1808, and were in a good state of preservation, notwithstanding the whole of these buildings had been set on fire, and all the wood work of them consumed. The walls of the castle were about two feet thick, and those of the barracks only ten inches; the former two stories high, and the latter but one. There were also the walls of Fort Littleton, at Port Royal, in South Carolina, remaining in good preservation; all these works were built of *tapia*, composed of lime and oyster shells, without sand. Since the revolution, there have been several buildings constructed of *tapia*. The mansion of General Charles Cotesworth Pinckney, on Pinckney island, in Broad river; and a college of four stories, at Beaufort, in South Carolina; and the splendid mansion of General Greene, on Cumberland island, in Georgia. These buildings are all composed of lime and shells, and are strong and permanent edifices. Since Savannah was destroyed by fire in 18—, that city has been rebuilt, I am informed, with beautiful edifices of *tapia*. In 1808, I was stationed in the southern states, as chief Engineer for North Carolina, South Carolina and Georgia. During that period I made several experiments on the *tapia*, and built several houses. One, in particular, is a noble edifice, the officers' quarters at Fort Johnson, in the harbour of Charleston. The edifice is 125 feet by 40, including the walls—the wings project 14 feet and are united by a colonnade; it has a basement, and was to have had two stories with a flat roof, but the splendid appearance of the building, when it was only one story high, alarmed some

individual, who reported to the War Department that I was erecting a palace; and the work was in consequence of the report, suspended; but afterwards finished with one story, as it now stands. The walls of this edifice were built by the labour of Africans, just arrived, in the last of the slave ships; a fact which I mention, to show that it does not require any remarkable skill to construct a *tapia* building. After the work was finished, the whole of the building was *rough-cast*, and it now has the appearance of a substantial stone house. The walls are twenty inches thick. I observed that in Carolina the composition is called *tabby*, and this I have supposed is a corruption of the Spanish word *tapia*. Drinkwater, in his siege of Gibraltar, speaks of the *tapia* batteries in that fortress, which are composed of similar materials—so that it may be presumed that the true word is *tapia*; so we will call it.

In the southern states, where there are no stones, the *tapia* is composed of lime, sand and oyster shells. The lime on the sea coast being generally indifferent, a greater proportion of that ingredient is requisite to make good *tapia*, than where lime of a superior quality can be obtained.

The proportions for making *tapia* on the coast of Carolina and Georgia, are—

One part lime,
Two parts sand,
Four parts shells.

In the country, where good lime is to be had and no shells, the proportions are—

One of lime,
Four of sand,
Five of stones.

The stones may be of any size convenient for mixing in the *tapia*.

The proportion of sand must be adapted to the strength of the lime. The principle is this: The lime and sand are to form the mortar, and the shells or stones are to supply the place of bricks or large stones in the walls. The proportions being now settled, we will proceed to show how the materials are mixed, and the manner of building with the composition—also the tools and implements for carrying on the work.

The method of mixing the *tapia* is simply this: The shells, or small stones, are first strewn on the ground, or on a floor of boards laid for the purpose; the lime is then thrown on top of the shells or stones; then the sand on the lime, and lastly water, sufficient to mix the whole, is thrown on, these ingredients, which are stirred up with a hoe or shovel, making the composition about as wet as common mortar. Thus prepared, the *tapia* is thrown up in heaps, to keep it moist, or is immediately put in tubs or hods and carried to the moulds, and then emptied and afterwards rammed in the moulds, the better to mix the several ingredients, and to force the *tapia* into the corners and fill up any interstices that may be left by the inequality of the stones or shells—thus making it one solid and compacted mass.

All the implements for mixing the *tapia* and for carrying on the work, are hoes and shovels for mixing the composition; buckets for the water, in which also the *tapia* may be carried to the moulds, if hods are not used; a plumb line, for regulating the perpendicularity of the walls; hods for carrying the composition to the moulds; wooden pestles, or rammers, for ramming the *tapia* into the moulds; which moulds are made in the following manner.

The mould is composed of any number of short pieces of scantling, about three inches square, of a length suitable to the thickness of the intended wall, having at each end a mortice or tenon hole, and as many upright pieces of scantling, three inches by two, about four feet high, including tenons at each end, so made as to enter the mortice easily into the cross piece below, and to receive a yoke, or cross piece above, which will keep two of them together;

then boards an inch and a half thick, are set against the inside of the uprights, and kept apart by means of a small stick of the exact size or thickness of the wall. Where scantling cannot readily be procured, billets of wood split and auger holes bored in them, and uprights of straight supplings tied together at the top with withes of bark or grape vine, or pieces of rope, by making several turns round the uprights and secured to a stick.

The site for the building is now selected and levelled. If it is intended to have a cellar, the excavation is made accordingly, but rather larger than for a stone wall, so as to give room to set the frames and to let the air pass round the wall, after it is made, in order that it may dry the quicker. The plan is then traced on the ground, the frames are then set at the distance of three feet apart, where they are let into the ground, so as to let the boards come in contact with the earth, and the boards are set in the frames composed of the cross pieces and uprights—the boards in the first instance are kept asunder by a small stick in length just the thickness of the intended wall. The composition is now thrown into the moulds commencing at one of the corners and continued until it is filled all round, and occasionally rammed to make it the more compact. By the time the whole of the wall has been gone round, the commencement or plan of beginning is ready to receive an additional layer; so proceeding round again it may be carried on the height of two boards, when the frames are loosened and taken off, and set anew—which is done in the following manner: The yokes on the top of the uprights are first loosened or taken off, then the boards are removed; the uprights next taken out of the cross pieces and then the cross pieces are drawn out of the wall, and placed on the top of the wall just made; when they are laid on the wall and arranged as when first put up; and thus the work is continued until it is finished. The frames of the doors and windows and other openings, are made of strong plank, say 24 or 3 inch plank, and exactly of the thickness of the wall, and placed in their proper positions, as the work goes on. These frames must be kept perpendicular, and thus serve as directors in the construction of the wall.

It is necessary in building high walls, to have scaffolding in the same manner as in buildings of any other materials; beams are laid as in other houses, and so are the rafters and other wood work—but in order to receive the beams more readily in their places, blocks of wood or bricks may be placed in the walls at the proper place where the beams are to rest, and taken out afterwards, the more readily to insert the ends of the beams; or places may easily be made with a trowel when the wall is yet green, for their reception.

The best time of the year to construct *tapia*, is during the dry season in summer, when, if sufficient hands are employed, two feet of wall may be carried on each day on a house of considerable size; though it is better not to proceed quite so rapidly, allowing more time for the *tapia* to dry. Two boards in height is generally as much as ought to be filled at once. The holes in the wall occasioned by drawing out the cross pieces, are filled with the same materials as that of which the wall is made, and are not perceptible afterwards. If the house or wall to be constructed is not very high, the uprights may be stuck into the ground at the proper distance, suited to the thickness of the intended wall, and the boards ranged as above directed, and the uprights fastened by cords or withes, bound round them and secured with a stick; and as the wall goes on, the boards may be raised, and small sticks of wood laid across the wall, to hold up the boards, when raised, to commence the new course; but the sticks must be sunk into the wall, while it is soft, so as to allow the boards to come in contact with the wall, in order to contain the *tapia*, as in

his clothes, and if his hat be not readily found, a handkerchief quickly supplies its place, and he hies on without it. Such choice spirits as those are exactly calculated for gentlemen farmers, provided they are really interested in the pursuit, and are resolved to be governed by the genuine principles of rural economy, and their previous habits have taught them the inestimable advantages that may be derived from observation, reflection and calculation; for, on the proper exercise of these invaluable principles, the prosperity of gentleman farming principally depends.

When a gentleman possessing these qualifications has purchased a farm, and is determined to live in style, I would advise him to lay off a sufficiency of ground for the necessary buildings, park, lawn, garden, fishpond, &c., and to charge this, with every improvement made on it, to "Family Establishment," and the remaining acres to the farm. As the taxes will, or ought to be, considerably increased in consequence of the expensive building, &c. erected for the family, he should be careful not to burden the farm with more than its just proportion of them. As his steward, butler, huntsman, gamekeeper, groom, coachman, and servants under them, together with his housekeeper, chambermaid, nurses, waiters, cook, scullions, &c. will have much leisure, he should draw a positive line of demarcation between these respectable inhabitants of the castle and plebeians on the farm; otherwise, the latter will become very restive and troublesome to him. They will murmur loudly against hard labour, while others, whom they will most certainly consider no better than themselves, are well paid for lolling a considerable portion of their time in the shade: more especially as they do not partake so freely of the delicacies from their employer's table, nor have the same opportunity of visiting his store rooms and cellars.

I would also advise the gentleman to keep a will always ready made, ordering the separate sale of the "Family Establishment," and of the farm; lest in the last act of his life he might disgrace gentleman farming. If both should happen to be sold together, the world (which in cases of this kind seldom, if ever, discriminates properly,) will attribute the enormous loss arising from the sale, to gentleman farming. If, however, the will be made, the gentleman may have the satisfaction of feeling easy on his dying pillow: at least so far as agriculture may be concerned: for his farming accounts will clearly demonstrate to the world, that after the farm has been charged with its first cost, and every necessary rational improvement made on it, that it is actually capable of producing a neat, clear, annual income of at least ten per cent. on the aggregate amount, and also a like interest on the capital necessary to carry it on: even after full allowance has been made for wear and tear, and also for the depreciation in value of horses grown older in his service, together with every necessary repair done to the buildings, fencing, &c. This is not all; for, although temporary depreciations in real property will occur from various causes, it is a well known fact, that, on the whole, its value increases with the increase of the population and prosperity of the country. It will also be found, if the gentleman has managed judiciously, that one acre of the soil, taking the whole on an average, will produce more than three acres did at the time he purchased the farm; unless, indeed, it was at that time more highly improved than farms generally are. For talents, capital and industry are capable of effecting an immense improvement in the soil, in a much shorter time than the probable existence of purchasers in general.

A gentleman should have all his buildings finished before he removes to the farm. The whole ought to be erected by contract; the undertakers finding all the materials. If this be done, they will

seldom cost half so much as they would do in the usual way. Much trouble and vexation will also be avoided, as his only care will be to observe that the business is properly executed.

The gentleman will also find it much to his interest, when it is practicable, to have his mowing, reaping and cradling done by the acre, and his corn fodder cut and gathered in the same way; his manure hauled out to the fields by the load, of so many cubic feet in each; his grounds ploughed and harrowed by the acre, himself or the contractors finding the teams; ditching done by the perch, and fencing by the pannel; wood chopped by the cord, and hauled in the same way; corn husked and cribbed by the bushel; it and other grain threshed in the same way; removing stumps, rocks, and other obstacles by the acre or job; clearing woodlands in the same way. The undertakers should either find their own board, or pay for it when they are not working,* as this will not only lessen the expense, but also stimulate them to more industry.

No live stock should be purchased, or any crops cultivated by the gentleman, until he removes to the farm. It is ten to one but the former will be so much neglected through the winter, that they will not sell for as much in the spring as they cost in the fall, although much money has been expended for food and attendance on them. It is also more than probable that crops grown at his expense during his absence or transient visits to the farm, would not sell for half the money they cost.

But as it is of the utmost consequence to hasten the improvement of the soil, and also to provide sufficient food for an extensive stock of cattle, the fields which are not in grass should be let out on shares to the farmers in his neighbourhood to be sown in small grain: either on one or more ploughings, as may best accord with the views of the cultivator. On these grounds red clover ought to be sown early in the spring. If gypsum be sown on them, hay and pasture will abound. The grounds may be rough, and weeds too plentiful; still, this is of but trivial consequence, when compared with the great advantage which may be derived from this invaluable practice.

It was by these means that the very rapid improvement was effected on the farm, in the vicinity of Philadelphia, formerly occupied by me.

I would advise the gentleman, even if he should remove immediately to the farm, to put out on shares, all the fields that are not in grass, and which may not be wanted for the commencement of his first course of crops.

These should be very limited until he becomes better acquainted with farming. This will enable him to execute the little he undertakes with more care and skill: also prevent the heavy losses, that but too often arise from gentlemen aiming at too much in the beginning. This is not all; for but very light crops of grain are to be expected from a hasty and imperfect cultivation of a thin soil; especially when conducted by a person who has not sufficient information to employ every favourable circumstance to the best advantage; consequently, if he should only get the straw for his share of the crop, it will be better than to risk the cultivation of all the fields himself; but it is probable he may make a much better contract than this. Here it seems proper to remark that, although it may be found necessary to meet the views of the farmer, to admit him to plough more than once, it is not only less expensive, but also far better to sow on but one ploughing, as the animal and vegetable matter is far better secured from useless waste; and unless the grounds be often ploughed, harrowed and roll-

ed, a smoother surface for mowing the clover is generally obtained by one ploughing than more, if the furrow slices be well turned, and levelled by the roller, previously to harrowing and sowing the small grain.

The produce of a highly improved and well cultivated farm, is very great. If extensive barns and other buildings, sufficient to store the whole of these bulky articles, be erected in the plainest, but at the same time in the best way, together with only such a dwelling house as is commonly built by the plain, but wealthy Pennsylvania farmer, the whole will amount to more money than the estate will bring, unless a favourable opportunity offers when it may happen to be sold. As the rise in the price of land frequently covers the loss, this serious evil is too seldom seen or considered. This, however, is not all, for the interest and repairs on the multiplied mass of building, will amount to a considerable sum, and is a yearly tax on the farm. When, in most instances, simple and cheap conveniences, would secure the crops better from waste, and also furnish preferable shelter for live stock, where they might be fattened with much less labour. England, though vastly too expensive in her agricultural pursuits, (since it has become fashionable for gentlemen to farm in that country,) is much more economical in the erection of farm buildings, than Pennsylvania, and in fact ought to be.

If it costs the owners of lands in England, as much for farm buildings, in proportion to the surface of the soil, as it costs too many Pennsylvania farmers, they would be entirely ruined. Here we very frequently see large piles of buildings erected on not more than from one hundred to a hundred and fifty acres of land, though the average product per acre, falls considerably short of that of Great Britain; when if half the money expended on useless stone and mortar, had been judiciously laid out in live stock and the improvement of the soil, the product would be at least equal, for our soil is naturally as good, and our climate is vastly more favourable to vegetation than the climate of England. Now if it be a fact, that the plain practical farmer is seldom remunerated for erecting very extensive, but plain buildings on a farm, it consequently follows that gentlemen farmer's extensive and splendid establishments, must be very injudicious, as well as injurious to themselves, and the interest of gentleman farming.

Regular and well formed fences look well, and of course should be preferred when the old ones are actually worn out; provided they are equally good, and not more expensive than others that will answer every purpose quite as well. The use of a fence is to defend the field. Beauty should never supersede economy in the practice of farming. Where land is cheap, and timber an incumbrance, a fence made by heaping up the logs, though far from being handsome, should be preferred; especially by gentlemen farmers, for they ought to patronize economy in their neighbourhood. Such a fence is formed by materials which must be removed before the grounds can be cultivated.

A sufficiency of them may as well be heaped up for a fence, as heaped and burned on the clearing; particularly as they are lasting, and may be readily repaired by the falling timber, and are, if well made, the best defence. Even the falling of the adjacent trees does not break them, neither can any domesticated animal jump over or break through them. If sheep or hogs climb over them, a little brush laid on the top, will effectually exclude those intruders. The logs, as is too often done, should not interlock the whole length of the fence. In that case, if the fire, which is often employed by the back-woods farmer, communicates to the fence, it is very difficult to stop its progress by removing a part of the logs. Therefore, the farmer should be careful to heap the logs in certain parts of the

* Disputes and complaining, however, would be better avoided by charging them a moderate price for board the whole time the job is in hand, and paying them more for doing the work.

fence, so that they may be readily removed aside, to put a stop to the progress of the fire. In these places the logs should be sufficiently light to insure the ready removal of them, if there should happen to be but one or two persons on the premises, when the accident takes place.

Altering roads is an expensive business, for the soil is worn off from the old ones, and they ought to be sufficiently enriched to promote vegetation. When they are actually badly contrived, it should be done; however, not until the gentleman has become sufficiently acquainted with his business, and also with the premises, to enable him to do it properly, and without useless expense.

I believe the gentleman will never be paid for filling gullies and quarries, if it be done off hand, and that he who does it, either injures his profession, by 'setting a bad example to his neighbourhood, or subjecting himself to the ridicule of it. But if he lay suitable materials across the former, in proper places to stop the washings that empty into them, time will effect this purpose much sooner than some would suppose; especially if the water furrows, when the field is cultivated, be constructed, so far as it may be found practicable, to run into them. The water furrows should also be formed to empty into the quarries when it can be done. This, together with making them the common receptacle for every useless rubbish, (which must be removed to some place,) will, in time, fill them up. While these slow, but certain processes are in operation, they will set an excellent example to the farmers in the neighbourhood; who but too generally, for the want of a little labour and attention, suffer these very unseemly nuisances to perpetuate their neglect.

For the preposterous and very injurious practice of levelling the heights and hollows in fields, we are indebted to England. There proper machines have been constructed to execute this ruinous business with despatch. With these the soil is removed from the heights and emptied into the hollows; which are already enriched by the washings from the heights. By this inconsiderate practice the soil is doubled in the hollows; and the heights, unless the soil be deep, are reduced to sterility. It would be an excellent practice to spread more manure on the heights, and leave the levelling of the field to cultivation and time, which will certainly effect it. He must be a bad farmer, who cannot water furrow his grounds so as to keep the hollows sufficiently dry.

(To be continued.)

[From the New England Farmer.]

PROFITABLE FARMING.

Mr. Richard Hildreth, of Sterling, having some business with me, in the course of conversation described to me the manner in which he manages his farms. His system is so simple, so successful, and so easy to be imitated, that the communication of it to the public will probably be beneficial as well as interesting.

His farm consists of sixty-five acres in the easterly part of Sterling, on the old road from Lancaster. The soil is good. From two and a half to three acres are annually planted with corn and potatoes. He raises about one hundred bushels of corn, at the rate of sixty bushels the acre. Of course the quantity of potatoes he raises must be small. He also raises a small quantity of spring wheat.

He keeps eleven cows, and one yoke of oxen, besides swine, but no horse. He has no hired men, except in hay time. He paid the last season about thirty dollars for help. His mowing ground is about fourteen acres.

His butter is sold to marketers at his door. His calves are sold alive at his door. His whole time is therefore employed in cultivation. His skimmed milk is given to his swine.

The produce sold from this farm the past season was as follows:—

Butter,	\$300 00
Hay,	100 00
Pork, about	150 00
Calves, about	70 00
Amount,	\$620 00
He values his farm at \$2500, his stock at \$500; in the whole \$3000. The interest of capital, therefore, is	
Wages paid in hay time,	\$180 00
Taxes, say,	30 00
	19 00
	\$229 00

From \$620 deduct 229, leaves \$391—or \$32 58 cents per month for his labour. He has a small wood lot at some distance, so that he pays no money for wood. The produce of the farm used in his family has not been considered in this account.

Here is exhibited a picture of independence and domestic felicity, beautiful for its simplicity, and worthy of imitation.

By not keeping a horse, he saves, probably, not less than one hundred dollars a year. By having a small farm, and selling his produce at the door, he is able to do most of his work himself, and thereby avoids the miserable and ruinous system of keeping hired men, who may be lazy and unfaithful, without diminishing their wages, and who by their wages often make more from the farm than the owner. The facts also suggest the advantage of applying the division of labour to farming. Perhaps marketing should be a distinct occupation.

Charleston, Jan. 8, 1827.

JOS. TUFTS.

HOTCHKISS'S STRAW CUTTER.

Mr. Benjamin Hale's account of the savings made by the use of Hotchkiss's Straw Cutter, employed to cut hay and straw as fodder for horses.

Mr. Hale is proprietor of a line of stages running between Newburyport and Boston. He says, The whole amount of hay purchased from April 1, to October 1, 1816, (six months), and used at the stage stable, T.cwt. q. lb was

At twenty-five dollars per ton (the lowest price at which hay was purchased, in 1816,) \$800 00
From October 1, 1816, to April 1, 1817, whole amount of hay and straw purchased for, and consumed by the same number of horses, viz.

	T. cwt. q. lb.	Cost.
Straw, 16 13 3 10		\$160 23
Hay, 13 14 1 00		350 00

\$510 23

Deduct, on hand April 1, 1817, by estimation, four tons more than there was October 1, 1816, at \$25 per ton, 100 \$410 23
Saving by the use of Hotchkiss's straw cutter, four months of the last six months, or the difference in expense in feeding with cut fodder and that which is uncut, \$389 77

Whole amount of hay used for the horses of the Salem stage, twenty-five in number, from April 1, to October 1, 1816, viz. 22 00 0 00

At \$30 per ton (the lowest price in Salem,) \$660 00

Whole amount consumed by the same number of horses, from October 1, 1816, to April 1, 1817,

	T. cwt. q. lb.	Cost.
Straw, 15 13 0 00		\$187 80
Hay, 2 15 0 00		81 00

Saving in using chopped fodder five months, 391 20

Total saving in using the straw cutter

nine months, viz. at Newburyport, 389 77
four months, 398 20
At Salem, five months,

Total, \$780 97

The member of the Board of Trustees of the Massachusetts Agricultural Society, to whom the above account was communicated by Mr. Hale, was informed by that gentleman, that he used no more grain from October, 1816, to April, 1817, than was used from April, 1816, to October, 1816.

[Mass. Agri. Rep. & Jour. p. 400, vol. iv.

INTERNAL IMPROVEMENT.

CHESAPEAKE AND DELAWARE CANAL.

So much interest is felt by all in this great public work, that there are few of our readers who will not be gratified to learn that the whole of the loan of \$200,000 asked for to prosecute it, was taken on Tuesday as soon as the books were opened, a considerable sum beyond that amount being offered.

We have seen a letter written within a few days, by two engineers of high reputation, (unconnected with this work,) who have lately examined the whole line of Canal. They speak both of its plan and prosecution in terms of decided approval; consider the mode of passing the low grounds as the best, if not the only one that could be adopted; and think that all material difficulties are overcome, and the prospect of completion within a reasonable period, absolutely certain. [Nat. Gaz.

THE CHESAPEAKE AND OHIO CANAL.

[It is well known that the accuracy of the estimate of the aggregate expense of this immense undertaking, formed by the Board of Internal Improvement, was questioned as soon as it was known; and at a late meeting of delegates at Washington, from several states most immediately interested, a committee was appointed to investigate the subject. We have not now room to present an abstract, as we may hereafter do, of the facts and arguments by which the committee arrive at and "report" the conclusion: that the whole work may be accomplished for one third of the amount (\$22,000,000,) set down by the Board of Internal Improvement. To all impartial observers, however, it is gratifying to see, that whilst the committee has disclaimed all impeachment of the motives of the board, they have paid to their science and industry the tribute of their decided acknowledgement. It is fortunate, too, in reference to the effect which must be produced upon the public mind by the opinion of a Board so entirely disinterested, and so distinguished for talents, that in every instance they have given as the ground of their opinion, the most minute and circumstantial data; thus affording themselves the means of correcting any errors of calculation as to cost of materials and labour. After all, perhaps the most general presumption will be, that the truth lies between the two estimates; and many who reflect upon the difficulty of anticipating all the incidental expenses of even the smallest undertaking, will agree with a member of the Board, who is said to have remarked to a prominent promoter of the Canal in question,—"Sir, your minimum is a good thing with which to begin a canal; and when you are fairly embarked in the work, if you meet with unexpected difficulties, you can have recourse to our maximum, and come out upon that."

From the mass of facts and able reasoning, and the many tables that accompany the proceedings of the Ohio and Chesapeake Canal Convention, now published in pamphlet form, and for a copy whereof we are indebted to the Hon. C. F. Mercer, the constant, indefatigable and efficient advocate of the work, we select the following, having no room for more at present:]

Prices adopted by the Board of Internal Improvement.		Prices adopted by the Commissioners.	
Lime—Average price for the whole line, per bushel.	\$ 0 48	Lime—Average price per bushel,	\$ 0 15
Hydraulic or tender cement lime, 60 cents per do. at Pittsburg, } for transportation, 70 per ditto,	1 30	At Pittsburg, now delivered of the best quality, from Beaver, (sup- ply inexhaustible,) 18 cents; transportation on Western sec- tion, 25 cents.	Per bushel,
Brick per thousand, delivered,	6 27	(Few required on the Eastern and Western sections),	0 43
Stone, delivered, per perch,	2 34	Per perch,	4 00
" wall built, with mortar, per perch,	5 88½	On Western section, \$1.63½—Eastern, 1.87½—average	0 75
" dry wall, built without mortar,	3 00	do. do. 87½ do. 1.12½ do.	1 75½
Cut Stone, Masonry—Cuts and stone for locks, blocks of 9 cubic feet content, per perch,	12 46	For same,	1 00
Cut lime stone as above,	15 32	For same,	4 75
Do. not less than ½ of a cubic yd. nor more than 1 yd., per perch	25 00	For same,	5 50
Labour—For common day-labourers the lowest estimate is,	1 00	For same { Western district, 50 cts. } { Eastern do. 62½ }	8 50
Per day,	8 36	For same,	0 56½
Brick work—For cubic yard 638 bricks for walls,	10 38	For same,	4 00
Same do. for arches,	21 49	For same,	4 87½
If tender cement per cubic yard of mortar,	1500 00	For same, (Western district),	8 00
Looks per foot of lift,		Locks are built on Ohio Canal for \$420 per foot lift, and on Pennsylv- ania Canal for \$400, 90 feet long, 16 feet wide, and 4½ deep; add \$100 per foot to increase their size to that of the Ches- apeake and Ohio Canal, viz: 102 ft. long, 16 wide, and 5 deep,	per foot.
			500 00
			1000 00

EXCAVATION.

By comparing the *estimated* cost of excavation with the *prices paid* for similar work on the Ohio Canal, and Western section of the Pennsylvania Canal, it appears that the estimate of the Board is, generally, in reference to the various species of excavation, more than double, and frequently three times the amount there paid.

LADIES' DEPARTMENT.

The following letter is said to be from the pen of one of the best and greatest men that Virginia has produced.

ADVICE FROM A FATHER TO HIS ONLY DAUGHTER

Writer immediately after her marriage.

My Dear—You have just entered into that state which is replete with happiness or misery. The issue depends upon that prudent, amiable, uniform conduct, which wisdom and virtue so strongly recommended, on the one hand, or on that imprudence which a want of reflection or passion may prompt, on the other.

You are allied to a man of honour, of talents, and of an open generous disposition. You have therefore, in your power, all the essential ingredients of domestic happiness; it cannot be marred, if you now reflect upon that system of conduct which you ought invariably to pursue—if you now see clearly, the path from which you will resolve never to deviate. Our conduct is often the result of whim or caprice, often such as will give us many a pang, unless we see beforehand, what is always the most praiseworthy, and the most essential to happiness.

The first maxim which you should impress deeply upon your mind, is never to attempt to control your husband by opposition, by displeasure, or any other mark of anger. A man of sense, of prudence, of warm feelings, cannot, and will not, bear an opposition of any kind, which is attended with an angry look or expression. The current of his affections is suddenly stopped; his attachment is weakened; he begins to feel a mortification, the most pungent; he is belittled even in his own eyes; and be assured, the wife who once excites those sentiments in the breast of a husband, will never regain the high ground which she might and ought to have retained. When he marries her, if he be a good man, he expects from her smiles, not frowns; he expects to find in her one who is not to control him—not to take from him the freedom of acting as his own judgment shall direct; but one who will place such confidence in him, as to believe that his prudence is his best guide. Little things, what in reality are mere trifles in themselves, often produce bickerings, and even quarrels. Never permit them to be a subject of dispute; yield them with pleasure, with a smile of affection. Be assured that one difference outweighs them all a thousand, or ten thousand times. A difference with your husband ought to be considered as the greatest calamity—as one that is to be most studiously guarded against; it is a demon which must never be permitted to enter a habitation where all should be peace, unimpaired confidence, and heart-felt affection. Besides, what can a woman gain by her opposition or her differences? Nothing. But she loses every thing; she loses her husband's respect for her virtues, she loses his love, and with that, all prospect of future happiness. She created her own misery, and then uttered

idle and silly complaints, but utters them in vain.—The love of a husband can be retained, only by the opinion which he entertains of his wife's goodness of heart, of her amiable disposition, of the sweetness of her temper, of her prudence, and of her devotion to him. Let nothing, upon any occasion, ever lessen that opinion. On the contrary, it should augment every day: he should have much

more reason to admire her for those excellent qualities, which will cast a lustre over a virtuous woman, when her personal attractions are no more.

Has your husband staid out longer than you expected? When he returns receive him as the partner of your heart. Has he disappointed you in something you expected, whether of ornament, or furniture, or of any conveniency? Never evince discontent; receive his apology with cheerfulness.— Does, he, when you are house keeper, invite company without informing you of it, or bring home with him a friend? Whatever may be your repast, however scanty it may be, however impossible it may be to add to it, receive them with a pleasing countenance, adorn your table with cheerfulness, give to your husband and to your company a hearty welcome; it will more than compensate for every other deficiency; it will evince love for your husband, good sense in yourself, and that politeness of manners, which acts as the most powerful charm; it will give to the plainest fare a zest superior to all that luxury can boast. Never be discontented on any occasion of this nature.

In the next place, as your husband's success in his profession will depend upon his popularity, and as the manners of a wife have no little influence in extending or lessening the respect and esteem of others for her husband, you should take care to be affable and polite to the poorest as well as to the richest. A reserved haughtiness is a sure indication of a weak mind and an unfeeling heart.

With respect to your servants, teach them to respect and love you, while you expect from them a reasonable discharge of their respective duties.—Never tease yourself, or them by scolding; it has no other effect than to render them discontented and impertinent. Admonish them with a calm firmness.

Cultivate your mind by the perusal of those books which instruct while they amuse. Do not devote much of your time to novels; there are a few which may be useful in improving and in giving a higher tone to our moral sensibility; but they tend to vitiate the taste, and to produce a disrelish for substantial intellectual food. Most plays are of the same cast; they are not friendly to the delicacy which is one of the ornaments of the female character. History, Geography, Poetry, Moral Essays, Biography, Travels, Sermons, and other well written religious productions, will not fail to enlarge your understanding, to render you a more agreeable companion, and to exalt your virtue. A woman devoid of rational ideas of religion, has no security for her virtue; it is sacrificed to her passions, whose voice, not that of God, is her only governing principle. Besides, in those hours of calamity to which families must be exposed, where will she find support, if it be not in her just reflections upon that all ruling Providence which governs the universe, whether animate or inanimate.

Mutual politeness between the most intimate friends, is essential to that harmony, which should never be once broken or interrupted. How important then is it between man and wife!—The more warm the attachment, the less will either party bear to be slighted, or treated with the smallest degree of rudeness or inattention. This politeness, then, if it be not in itself a virtue, is at least the means of giving to real goodness a new lustre; it is the means of preventing discontent, and even quarrels; it is the oil of intercourse, it removes asperities, and gives to every thing a smooth, an even, and a pleasing movement.

I will only add, that matrimonial happiness does not depend upon wealth; no, it is not to be found in wealth, but in minds properly tempered and united to our respective situations. Competency is necessary; all beyond that point, is ideal. Do not suppose, however, that I would not advise your husband to augment his property by all honest and commendable means. I would wish to see him actively

engaged in such a pursuit, because engagement, a sedulous employment, in obtaining some laudable end, is essential to happiness. In the attainment of a fortune, by honourable means, and particularly by professional exertion, a man derives particular satisfaction, in self applause, as well as from the increasing estimation in which he is held by those around him.

In the management of your domestic concerns, let prudence and wise economy prevail. Let neatness, order, judgment, be seen in all your different departments. Unite liberality with a just frugality; always reserve something for the hand of charity; and never let your door be closed to the voice of suffering humanity. Your servants, in particular, will have the strongest claim upon your charity; let them be well fed, well clothed, nursed in sickness, and never unjustly treated.

SPORTING OILIO.

DUCK SHOOTING.

J. S. SKINNER, Esq.

Sir,—In No. 42 of the present volume, p. 334, is a piece signed "A Sportsman," and taken from the Elkton Press, respecting the toleing of ducks. The mode is minutely and correctly described, and the writer has fallen into one error only. He speaks of toleing ducks by dogs as a mode practised on the Susquehanna, and confined to that river. In this particular he is mistaken; that mode of toleing is very old, and is known and used on almost every river and inlet in Maryland, with the same success and in the same manner mentioned by "A Sportsman."

To account for this phenomenon might prove difficult. It is sufficient for us as sportsmen to know the fact is so; and I can communicate two other modes not so generally known. Let the gunner have a small blind on the shore, at some distance from the one built in the water, with a hole or aperture sufficiently large to thrust the arm through, while the body is concealed. Let the person behind the small blind, gently wave in his hand from right to left, and left to right, a red silk handkerchief, suffering it to rest but a moment on the ground. The hole should be about two feet from the earth. The gunner in the other blind will discover the ducks advancing to the shore, and when at a proper distance he may shoot them. The other mode is practised at night. If a person with his ramrod, or a small stick, will make a slight noise in the water near the shore, he will find the ducks approaching the shore. A negro boy will answer for either mode, and the best way is to conceal him in a blind at some distance from that where the sportsman is posted, and most frequently on the shore, if the advanced blind be not too far in the water.

JAMES BOYLE.

(From a Charleston paper.)

MATCH AGAINST TIME.

Mr. Editor—I send you the following for publication, as the result of a Match against Time, as cleverly performed as any hitherto reported, either in the sporting annals of the old country, or of our own.

It may be proper to remark for the information of your distant readers, that the agreement entered into between the parties, was, that the horse should travel either in a sulky, or under the saddle, fifty times round the Washington Race Ground, a distance of fifty miles in five successive hours. The horse won the match, as will be found below; and as an evidence of how little he was affected by it, on coming out through the fiftieth mile, he ran away, and was with great difficulty stopped, after running on

full speed, a distance of at least three miles more, over a very heavy road. The match was decided, too, under the most disadvantageous circumstances, as the weather had been extremely wet and hazy, up to the hour appointed for starting, when the sun came out unusually bright and warm for the season, and created a very unpleasant and heated atmosphere. In fact, the horse was completely steamed throughout the whole of his arduous undertaking.

I have seen, Mr. Editor, matches of all kinds decided in England, where every thing that experience in jockeyship could suggest, was put in requisition to insure success, but I must do the gentleman who drove in the present instance, the justice to say, that I never before witnessed so much judgment and so much dexterity displayed by any individual similarly situated. It was owing altogether to his manner of driving and humouring his horse, that he was enabled to travel with so much ease to himself and satisfaction to every beholder.

I am induced, as you will find, to be particular in my report of this match, from a conviction that, although it was performed in the suburbs of our city, or as some on the other side of the Atlantic will say, in the *wilds of America*, it will not fail, however, to gain admittance into the columns of every European magazine that is conducted as it should be—with candour enough to give every section of the world credit for every thing it contributes towards furthering the objects of the

TURF.

Time kept by a Patent Lever and Chronometer.
Started at 11 o'clock, Jan. 9, 1827.

Miles.	Time of going each Mile.		Aggregate Time.		Remarks.
	M.	S.	H.	M. S.	
1	5	15		5 15	
2	5	49		11 4	
3	5	53		16 57	
4	5	50		22 47	
5	5	50		28 37	
6	6	5		34 42	
7	6	3		40 45	
8	6	10		46 55	
9	6	17		53 12	
10	6	6		59 18	
1	6	29	1	5 47	FIRST HOUR.
2	6	8		11 55	Halted 20 seconds.
3	6	12		1 18 7	
4	6	3		1 24 10	
5	6	3		1 30 13	
6	6	6		1 36 19	
7	6	1		1 42 20	
8	6	7		1 48 27	
9	6	6		1 54 33	
20	5	58	2	00 31	SECOND HOUR.
1	6	34		2 7 5	Halted 55 seconds.
2	5	37		2 12 42	
3	5	49		2 18 31	
4	5	54		2 24 25	
5	5	49		2 30 14	
6	5	51		2 36 5	
7	5	59		2 42 4	
8	5	57		2 48 1	
9	5	59		2 54 00	
30	5	45	2	59 45	THIRD HOUR.
1	6	19		3 6 4	Halted 45 seconds.
2	5	52		3 11 56	
3	5	50		3 17 46	
4	5	59		3 23 45	Breathed 10 do.
5	5	50		3 29 35	
6	5	55		3 35 30	
7	6	3		3 41 33	
8	6	13		3 47 46	
9	6	2		3 53 48	Walked 15 do.
40	5	50	3	59 38	FOURTH HOUR.
1	6	39		4 6 17	Halted 60 seconds.
2	5	22		4 11 39	
3	5	27		4 17 6	
4	5	29		4 22 35	

5	5	41	4	28	16	Walked 14 do.
6	5	24	4	33	40	
7	6	39	4	40	19	Halted 15 do.
8	6	30	4	46	49	Cantered part of the 3 last miles.
9	6	1	4	52	50	
50	4	58	4	57	40	

Won the match, having 2 minutes and 12 seconds to spare.

[The gentleman who drove the horse was Mr. John Randolph. The account would have been yet more satisfactory, if it had given the age, colour, name, pedigree and size of the horse, with a description of the vehicle in which he was driven. We have no doubt he was *deep in the blood*.]

MISCELLANEOUS.

WOOLLEN MANUFACTURES.

[Answer to Veritas in the last American Farmer—from the National Intelligencer.]

Audi alteram partem.

TO THE EDITORS.

Veritas, in your paper of yesterday, gave an estimate of the charges upon the importation of broadcloths, and thence asserted, (and doubtless to influence and sway the public mind upon the subject he had in hand,) "that the American manufacturer of woollen goods has a *real advantage* over the English, of 65 per cent. and still is discontented and clamorous." Now, I will show you that, instead of 65 per cent he has *no advantage*—that the advantage is *against* him.

Veritas has taken an invoice of broadcloths, and added to it the exchange, commissions, freight, &c. with the ad valorem duty of 33½ per cent., amounting, according to his estimate, to 65 per cent., and this, he says, is the measure of the *real advantage* which the American manufacturer has over the English manufacturer. Admitting, for the present purpose, that Veritas is right as far as he goes, although his estimate is too high, yet it is obvious that nothing can be deduced from it, because his view is partial. He has taken into his account the facts only in relation to *one side* of the case. Look at the other.

The English manufacturer pays but a penny a pound duty upon the raw material. The American manufacturer pays 30 per cent. The English manufacturer pays, with exchange from 8 to 12 per cent. in his favour; the American, with exchange from 8 to 12 per cent. against him. And, as Veritas has added, freight, commissions, &c. to the ad valorem duty on cloth, add for the same for the duty on wool, which the American manufacturer pays beyond what, in like case, the English manufacturer pays. The wool constitutes about one-half the value of common, and two-thirds the value of fine, cloths; and it will be a low estimate, in the particulars thus far stated, to say that the English manufacturer has an advantage of 30 per cent.

Labour in England is a third cheaper than in the United States. Other things being equal, this of itself gives to the English manufacturer an advantage of 33½ per cent., to say nothing of the immense advantage resulting from experience, skill, and capital, and the undisturbed possession of his own market, and the benefit of ours for his redundant or other products, available at his pleasure. The English manufacturer makes his cloth with the *certainly* of the British market throughout the British dominions, to the exclusion of every competitor. The duties as now graduated amount to this. The safety of the British empire demands it. But the American manufacturer makes his cloth without the certainty of any thing.

Thus far, then, the British manufacturer has an aggregate advantage of 63½ per cent. Add to this,

what more properly ought to have been deducted from the duties paid by the importing merchant, the notorious evasions of the customs, and it will be found that the invoice of British goods which Veritas has given, comes into the market of the United States, with, to us, ruinous advantages over the American manufacturer. How, then, could Veritas say that he has a clear advantage of 65 per cent. over the English manufacturer, and add to his assertion the reproach that followed?

A. B.

Deaths in the City of Washington, in the years (with the supposed population of each year,) from 1820.

Years	1820	1821	1822	1823	1824	1825	1826
Deaths,	327	355	298	356	290	225	283
Sup'd pop'n	13,474	14,031	14,746	15,183	15,493	16,016	16,677

The City, as well as the District at large, suffers much from the want of a code of laws, applicable to the whole; for it is now almost impossible for any citizen to say what is the law of the place. Another evil under which they labour, arises from the introduction of non-resident slaves, who are brought here for sale or hire, great numbers of whom are hired by individuals by the year, re-hired by the month or day, and many of them employed on the public works, to the great injury of the free labourers, who have families to support, and feel an interest in the welfare of the place, besides adding to its character and physical strength, in the hour of danger.

CANNON.

In 1545, it was remarked, as extraordinary, that the French and English fleets had fired not less than three hundred cannon shot, in an engagement of two hours! It is therefore evident, that few cannon were carried by any one ship; and indeed, we believe, that originally the number was only *two*, placed in a castle in the forepart of the ship—whence the name of “forecastle” is still retained, though the guns are removed. These guns were also of small dimensions; and probably, at first fixed, to prevent their recoil, as we know they were on land. When the accidents to which their aim was liable, in consequence of the motion of the ship, &c. are considered, we may safely infer that the slaughter they produced could not be great. The ordnance was afterwards augmented in number, by the admission of pieces of various descriptions and calibres, which stood without assortment on the same deck.

EDITORIAL CORRESPONDENCE.

Extract from a letter of an American—dated Paris, Nov. 1826.

My last letter mentioned that I contemplated a visit to Gen. Lafayette, at the ancient chateau of La Grange. A few days since Mr. — and myself set off for the purpose of accomplishing this, which has proved to be the most deeply interesting visit that I have made, and one which shall not soon be effaced from my remembrance. The distance from Paris is 33 miles, and we went in a diligence to Rosoy, and thence in a small voiture to La Grange, where we arrived in the evening. Driving through the ancient arched gateway into the court yard, we alighted and were immediately ushered up stairs, where we met Mr. G. W. Lafayette in the anti-room, who conducted us into the drawing room, where sat his father with several gentlemen. Upon entering, we soon recognized the benignant features upon which we had so often dwelt with interest during his visit to our country; and the General immediately arose, and advancing with a friendly smile to receive us, welcomed us in the kindest manner. After reading the letter which I do-

livered, he began to inquire about his — friends; manifesting the greatest interest for them, and the most minute recollection of every thing concerning them. He inquired most particularly about the young ladies of his acquaintance, and wished to know who had been married since he left us. After having conversed with the General for some time, Mr. G. W. Lafayette shewed us to our room; and on returning to the drawing room, I was much surprised at the number of ladies and gentlemen, particularly of the former, who were assembled there, amounting to quite a large party, although the greater proportion of them were members of the family of Lafayette. The General advancing to meet me, took me round and introduced me to most of them; and among the company were three American ladies, the celebrated Benjamin Constant, one of the first literary and political characters of France, and a particular friend of the General; Levasseur, his companion during his tour in the United States, together with several others.

Gen. Lafayette's family while at La Grange, consists of his son, G. W. L. and his lady, the Comtesse Lasteyrie and Madame Latourbourg, his daughters; nine granddaughters, one of whom is married, and two or three grandsons, very young—the Comte Lasteyrie is also there, but he has long been very ill.

Dinner being soon announced we all went down, and at the table were seated twelve ladies and ten gentlemen, besides half a dozen of the younger members of the family at a side table. Such is the pristine hospitality of La Grange, and it recalls the memory of patriarchal times to see the venerable patriot, in the evening of his days, thus surrounded by his descendants, all of whom manifest towards him the most respectful and affectionate attention. After a very pleasant time spent at the table, we returned to the drawing room, and the evening passed away in a most agreeable manner in conversation with the General and the young ladies. There are six of the granddaughters who are grown up, all of whom are very agreeable. They speak English, more or less; but I could not persuade any of them to converse with me in that language, when they found I understood French—and this is their invariable practice. They are all very much attached to our country, and express a great desire to visit it.

I had much conversation with our venerable host, during which I often found my attention wandering from the subject on which he spoke to the character of the speaker himself, and the many admirable passages of his eventful life; to his early and generous self-devotion to the cause of our country when struggling in her infancy, almost hopelessly, for independence; to his firm, his fearless and consistent deportment throughout that dreadful revolution which deluged his native land with blood, when his adherence to principle lost him his popularity and endangered his life; and, finally, to his recent visit to the United States, and his long continued triumphal progress through the land for whose liberty he so gallantly fought in his youth. And when, after a most interesting and agreeable evening, I retired to my room, it was long before I could close my eyes; my thoughts recurring to the society in which I had just been, and dwelling upon him whose hospitality I was now enjoying. I could hardly realize that I was actually at La Grange, the abode of the noble minded, the excellent Lafayette; the mansion of him whom we had so recently seen on the other side of the ocean, receiving a joyous welcome to the “hearts and the homes” of a grateful nation.

In the morning, we all re-assembled at breakfast; on returning from which to the drawing room, our attention was called to the “star-spangled banner,” the beautiful flag of the Brandywine, suspended in the adjoining apartment above the portraits of Washington and Franklin, one of its folds being gracefully thrown over the former. It was a grate-

ful spectacle, indeed, to an American, to see the flag of his country graced thus with an honoured station in a foreign land, and in the abode of one of its earliest and bravest defenders. This was presented to General Lafayette by the officers of the Brandywine upon his leaving the frigate at Havre, accompanied with a request that it might be displayed upon the anniversaries of Washington's birth day and the Declaration of Independence—which he has more than complied with from the situation assigned it.

Around the walls of the sitting room are hung the portraits of all the Presidents of the U. States.

We were invited to go out to shoot with some of the gentlemen, but declined, preferring a walk with the young ladies, who accompanied us around the grounds in the vicinity of the chateau, notwithstanding the wet and unpleasant state of the paths, which, however, the ladies of France do not much dread. On returning to the house, the General went out to plan some improvements in his grounds, but not without first calling his granddaughters around him to hold a consultation on the subject; and it was really an interesting spectacle, to behold one who had been a chief actor in so many trying scenes, thus kindly consulting the taste and the wishes of his amiable descendants as they gathered around him, upon a subject of comparatively so trivial a nature.

In the course of the day we walked out to obtain a view of the front of the chateau, which we had but imperfectly seen the evening before, and which is the finest part of it. On each side of the arched gateway before mentioned, is a large round building in turretted form, surmounted by cupolas, the whole most richly and beautifully covered with luxuriant ivy clinging to the grey walls of this time honoured edifice, and finely contrasting its deep green with their venerable hue. The chateau of La Grange is the ancestral residence of General Lafayette, and is 900 years old.

At dinner as large a party assembled as on the preceding day, and the time passed very pleasantly, and after another highly agreeable evening we took leave of this interesting family, intending to return on the next day to Paris. The General wished us to remain longer, but finding we were resolved to go, he promised to send us to Rosoy in his own carriage, and to rise in the morning to see us off. We remonstrated against this, but he said he had always been an early riser. In the morning we found Mr. G. W. L. waiting for us below, some coffee prepared for us, and the carriage at the door. Our venerable host, early as it was, soon came down to see us, and after a short conversation we bade them farewell, and stepping into the carriage, departed from the hospitable mansion of La Grange, perhaps never again to experience the kindness of its most estimable proprietor, and his most amiable and interesting family. Thus terminated a visit, in every respect truly delightful and interesting; one which will ever be most deeply engraven on my memory; one, upon the recollection of which, I never cease to dwell with the greatest pleasure.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 26, 1827.

THE PROSPECTS OF MARYLAND.

The actual condition and prospects of our native state are subjects that often excite melancholy reflections; but to what end shall we, by expressing them, give rise to unpleasant emotions in the minds of our readers—*cui bono?* The answer is, that it may be in this, as in the case of prevailing and destructive maladies amongst men and beasts, it often happens that he who describes their symptoms, and

proclaims their effects, though he know not how to treat them; still renders an important publick service, and is entitled to the praise of benevolence, by drawing forth efficient advice and saving prescription, from those whose greater experience enables them to point out the latent cause of the disorder, and to designate the means of prevention or cure. The case of Maryland is, we apprehend, not alone; her depressed and deteriorating condition is, we fear, common to all her southern and western sisters. Are we asked for the proof of the declining prospects of the farming interest? We answer, heaven grant that we may be mistaken! but let every man look around him; let his memory, if it can, run back for twenty or thirty years, taking, each one the circle of his own county; did it not then abound in well bred gentlemen farmers, living in good dwellings well supplied; their families genteelly clad and well educated; their churches in good repair and well attended; the intercourse of neighbouring families social and frequent, and their manners and amusements comparatively refined and elegant? Was there not every where an air of thriving prosperity, accompanied by all the evidences of good intellectual cultivation and rational enjoyments? What is *now* the state of the country? Does any one build substantial dwellings on a scale, and with conveniences for the genteel accommodation and hospitable entertainment of friends? Do we see through the country successive plantations of young orchards to supply the place of those whose ruins only serve as perishing monuments of better management and better times? Have not truck patches with worm fences, and cabbages, and potatoes, taken the place of all the old fruitful paled gardens, neatly laid out and planted with jessamine, and tulips, and roses, and pinks, and heartsease? Such *were* the signs of comfort, and such the seats that some of us can just remember, as

"The beautiful epitome
Of all that useful is and rare,
Where comfort sat with smiling air
And laughing hospitality."

Formerly there were very many farmers and planters in every county in the state, who could maintain their families in a style of at least comparative affluence; enjoying leisure for mental improvement, and a taste for social pleasures. They could well afford, in union with three or four of their neighbours, to employ a good classical teacher for their children; whilst not a few had the means of sending their sons to some convenient college; delighted and happy in the well founded hope of seeing them rise to stations of publick usefulness and fame; but how many planters or farmers can now spare for a purpose *so dear to every parent's heart*, \$600, or even half of it, from their money income, to send their sons from home?

Need we say that we contemplate with sorrow the sombre picture we have drawn, and that our greatest happiness would be to find that it is not warranted by the actual condition of that class of worthy and honourable citizens, whose interests will never cease to be the subject of our most earnest solicitude. Whether it be the natural tendency of some part of our political machinery to accelerate the march of poverty, and, as a consequence, to beget ignorance and crime, or whether the increase of these deplorable evils amongst ourselves be the inevitable result of the present general state and relations of the world—whether it be within the scope and power of domestic legislation, to arrest their progress and to mitigate their effects, are questions which imperiously demand the consideration of the philanthropist and the lawgiver. That poverty is progressive, and licentiousness increasing in our country, cannot be denied. When reckless necessities stimulate ignorance, vices spring up in society as spontaneously as the rankest weeds from unclean soil. Far be it from us to offend or disparage

those whom we so much regard. The surgeon uses his probe, not to inflict pain, but to cure the wound that gives it. Our object is to invite the suggestions of those who can benefit society by exposing the sources of actual depreciation, and by specifying the appropriate remedy. Does it result from the subdivision of estates; the existence of slavery, and the more and more unprofitable results of that species of labour; from the desertion of their native abodes by all the most enterprising young men, the *élite* of the country to seek richer soils in newer countries, or more pleasure with less labour in a city life; or is this last specification an effect rather than a cause?—of one thing he who runs may read; it requires no Socrates nor Solon to tell us that, as when a *people* become poor and ignorant, corruption and slavery are treading close upon their heels; so something should be done, and done speedily and effectually, to educate the *mass* of the rising generation. The power to do this resides in the *legislature of the states*. Let them use it whilst yet there is amongst the people discernment and good sense enough to support them in the measure. The various features of this unpleasant subject will be hereafter taken up and canvassed more in detail.

—The late news from England produced a sort of fluttering in this market, for a few hours. The holders of flour asked the first day \$1 per barrel advance; the next day it fell to 50 cents advance—that is \$5.50 for wharf flour, at which it *sticks*. It had not, as we have understood, any sensible effect on tobacco and cotton. The importance of recent movements abroad will be settled, probably, by the next arrival. The Spaniards will succumb and disavow their agency in the movements of the Portuguese insurgents, and the port of defiance assumed by England will have deterred other powers from giving her countenance and support; or, Spain, assured of support from others, will take up the glove, and a general war will ensue—a war of principle—of representative monarchy against absolute or legitimate despotism; and being a war of opinion without any particular aggression or geographical boundary in dispute, it will be of wide extent and of long duration. God grant that one step may be gained in the cause and the progress of freedom. At all events, as respects our interest, we may calculate that England will maintain in Portugal an army of observation; which, of itself, will have a tendency to promote improvement in the price of our bread stuffs. For ourselves, we will not initiate certain affected philanthropists so far, as to pretend that we do not wish for war—*bella, horrida bella*—a long and obstinate war of manœuvres, without bloodshed—leaving all alive to eat their rations, without settling the dispute; though we have understood it to be the opinion expressed to one of our senators, by Mr. Gallatin, of long-headed repute, that the affair will blow over, if not in nine, perhaps in nineteen days! Better prices, say we, to the *American Farmer*, let what may happen.

—A correspondent at St. Augustine, Florida, under date 3d January, inst., postscribes—"with hands almost frozen."

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	6	10	9	12
BEEF-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16½	20	22
Havana,	—	14	16		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	11½		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	16	16	18
Dipt,	—	12	13½		16
CHEESE,	—	8½	12	12	15
FEATHERS, Live, . .	—	50	32	37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . .	—	5 50	6 00		
FLAXSEED,	bush	1 00	1 10		
FLOUR, Superfine, city,	bbl.	5 50	6 75		
Fine,	—	5 25	5 50		
Susquehanna, superfi.	—				none
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	58	60		
white	—	58	60		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler, & Red, new	—	1 00	1 10		
do. Red, Susque. . .	—	1 05	1 10		
Rye,	—	75	80		
Barley, Eastern . . .	—	1 12½	1 22		
Do. country	—	90	1 00		
Clover Seed, Red . .	bush	4 50	5 00	5 50	
Ruta Baga Seed, . .	lb.	87		1 00	
Orchard Grass Seed, .	bush	3 50			none
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	4 00		5 00	
Oats,	—	45		50	
Beans, White, . . .	—	1 25	1 37½	2 00	
HEMP, Russia, clean, .	ton	250	260		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	18		25	
HOGS' LARD,	—	9	10	12	
LEAD, Pig	lb.	6½	6½		
Bar	—	7½	8		
LEATHER, Soal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.		50		75
Havana, 1st qual. . .	—	30	32	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	1 75			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	33	34	40	
Spermaceti, winter .	—	75	80	88	
PORK, Baltimore Mess,	bbl.	11 50	12 00		
do. Prime,	—	9 00	9 50		
PLASTER, cargo price,	ton.	3 25			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3½	3½	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	8	10	12
WHISKEY, 1st proof, .	gal.	35	36	50	
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	31	32	50	
SUGARS, Havana White,	c. lb.	12 50	13	14	15
do. Brown,	—	10 00	10 50		
Louisiana,	—	8 00	9 10	10	
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . .	—	7	12	12	18
Pepper,	—	15		25	
SALT, St. Ubes, . . .	bush	50		75	
Liverpool ground . .	—	54		75	
SHOT, Balt. all sizes,	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full bld	lb.	30	35		
do. crossed,	—	20	24		
Common, Country, . .	—	18	22		
Skinnors' or Pulled, .	—	20	25		

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INTERNAL IMPROVEMENT.

THE OHIO AND CHESAPEAKE CANAL.

[There is so large a proportion of the readers of this journal, beyond the districts immediately interested in the construction of the Ohio and Chesapeake Canal, that we at first feared they might think we are giving too much space to the extracts from the Report of the Board of Engineers; but when they shall have read them, and especially that one which we now give, under the head of "GENERAL CONSIDERATIONS," if they do not thank, we are sure they will not censure us. These general considerations are obviously written by a mathematical head, and are of great interest and importance to every reader; as they explain so clearly the various interests to be considered, and how they are to be considered, in all attempts to calculate the value of every projected internal improvement. The exposition appears to us to be remarkably lucid and able, and the results, as to the effects of this new and great outlet to the ocean, from the immensely fertile and extensive regions of the west, seem to have been adopted with great caution. Whilst, as mere executive officers, acting under specific instructions, the Board have very properly avoided any question as to the constitutionality of this measure, under the granted powers of the federal government; they have most emphatically illustrated its expediency on the score of the general welfare, and its connection with the common defence in a military point of view.]

We will not pass the occasion without expressing the conviction we have long felt of the invaluable acquisition made by the country, when it secured for its use, the talents and services of Gen. BERNARD. To have known him since his arrival has been amongst our greatest intellectual and social pleasures. Whether in the field or the drawing room, at the levee or the social fireside, he is the same simple and unostentatious, but profound and liberal man. Our country was just at that time of its growth, and in that state of its affairs to require talents like his; and though the wind that brought him may have been ill to him, it was good to us. We should not have said thus much had he not have come a "stranger within our gates," from having enjoyed the personal esteem and favours of the greatest military genius the world has ever known. It is to the honour of our officers, who were necessarily wanting in the experience which he united with science; that they received him with kindness, and continue to regard him, without his being conscious of it, as "a lamp to their feet." The maps and charts which have been issued along with the various Reports from the corps of Engineers, do much honour to the Topographical Bureau; and we are persuaded, from some personal observation, that the country is not fully sensible of the laborious, but scientific and important character of the services rendered by the Engineer Department, under the superintendence of Gen. Macomb. By its agency fortifications are planned with the utmost skill, and built with the greatest economy—roads are traced through trackless forests—and the people are taught how the torrents of hitherto inaccessible mountains may be made to bear in gentleness and safety, the products of industry the most interior, to the populous seats of external commerce—carrying back in return the manufacture of every art and the luxuries of every clime.]

GENERAL CONSIDERATIONS.

The public works of the moderns differ essentially in their construction from those erected by the ancients: these bestowed much magnificence and grandeur on their edifices. In former times, large and unemployed populations, great masses reduced to servitude, by war or conquest, afforded such

powerful means of execution, that economy was not an essential point to be consulted: for, to wage war and to erect public works, appear to have been the chief occupations of the ancient nations, among whom civilization had attained a considerable degree of improvement.

The situation of the moderns is different: with them, the subdivision of labour among the different branches of industry, the abolition of slavery, or the progressive amelioration of the state of servitude where it does exist, in restoring to man his dignity and his liberty of action, have attached to his labour a value which is identified with his moral and physical existence. Economy has, therefore, become an essential object in the erection of monuments consecrated to the public prosperity, and besides the conditions of durability and expedience, it is also required that the efforts made should be in due proportion with the useful results obtained. These conditions being fulfilled, such monuments justly become the objects of national pride; and combined with the civil and political institutions, the arts and sciences, literature, and naval and military achievements, form an union of glory around which the sympathies of the country are rallied, are strengthened, and are continued. Thus we perceive all the enlightened governments of the present time to favour such undertakings: they well know that, in the age of illumination and of rapid amelioration in which we are placed, all that contributes to the national glory, and promises certain and material advantages should receive a prompt and judicious execution. For the Union, such is the Chesapeake and Ohio Canal.

This great undertaking has no equal in any country, either in relation to the works of every kind which its construction will require, or to the immense political, commercial, and military advantages which will result from its execution. It is a work truly national: and if, on the one hand, it is beyond the means, always limited, of private enterprise, so, on the other, it is too essential to the prosperity, the harmony, and the greatness of the Union, for its execution to be deferred, without neglecting advantages which will far exceed the expense into which it will necessarily lead. It is not, in fact, because a work demands a large sum for its execution, that it is costly, but only when the capital employed to create it is beyond all proportion to the useful results to be obtained. It is, therefore, the relation between this capital and these results which is to be taken into consideration. The extent of the first, however great, becomes entirely indifferent, when, on the other hand, the resources of the nation are equal to its attainment.

Considered under this point of view, the Chesapeake and Ohio Canal, notwithstanding the great first cost which it will require to receive such an execution as is suitable to its object, may, with full and entire confidence, be considered as not expensive, in relation to the immense advantages, of every kind, which it offers. This position we will now attempt to demonstrate, beginning by its physical advantages: that is to say, those susceptible of being estimated by the standard of money.

When a nation undertakes a work of great public utility, such as that under consideration, the revenue is not the essential object to take into consideration: its views are of a more elevated order: they are all, and, it may be said, exclusively, directed towards the great and general interests of the community. These interests are principally to bring into contact and relation, districts which are naturally separated, either by great distance, or by physical obstacles; to connect countries deprived of natural outlets, with those where these exist; to create for the products of the soil and of industry, a value which they do not possess, from the want of a market, and from the too heavy expense of transportation; to increase, progressively, the quan-

tity of these products, by the facility of exchanging them with distant countries; to encourage, by these means, and enliven agriculture; to support and increase manufacturing establishments; to vary the class of producers, and bring it near to the class of consumers; in fine, to augment both production and consumption, by the facility of transporting products from sections where they abound to those where they are deficient.

When these national interests are satisfied, the principal object for which the work is undertaken is accomplished; and the fiscal advantage derived from the canal, and which would be an essential point to a company, becomes, in this case, of merely secondary importance for the nation. We will, therefore, in the first instance, endeavour to estimate the physical and national advantages which it appears to us must result immediately from the accomplishment of the great work before us; and next, we will take into consideration the secondary object, that is to say, the probable revenue of the canal.

Before submitting our computations on this head, we should premise, that we will steadily follow the plan we have adopted in the former part of this report, namely, to avoid as much as in our power falling into any exaggeration in favour of the work, and to take the greatest care to remain below even the most probable chances. Nevertheless, if it be found that we have sometimes failed in this, the fault is to be attributed to an error of judgment on our part, and not to any want of candour in our intentions.

The districts the more particularly interested in the construction of the Chesapeake and Ohio Canal, may be divided into two classes: 1st. The counties situated immediately adjacent to the line of canal; 2d. The western states to which this communication will prove a favourable outlet to the Atlantic.

Among the first are:		Inhabitants.
Nine counties of Pennsylvania, whose population, according to the census of 1820, amounted to		256,782
A population amounting to something more than one-fourth of that of the state.		
Four counties of Maryland, composing something less than one-fourth of the population of the state.		92,000
Thirteen counties of Virginia, population amounting to		189,585
Something less than one-fifth of that of the state		
Total of these twenty-six counties,		538,367
This total is something more than one-fifth of the whole population of the three states.		
The District of Columbia,		33,039
Total,		571,406
Among the western states to which the canal would afford a direct outlet to the Atlantic, we will only take Kentucky, Ohio and Indiana, whose respective population is as follows, according to the census of 1820:		Inhabitants.
Kentucky,	.	564,317
Ohio,	.	551,434
Indiana,	.	147,178
Total,		1,262,929
Which added to		571,406
Gives		1,864,335
Forming nearly one-fifth of the population of the Union		

This population is the least that we can consider as directly interested in this undertaking. We will not take into account either the other counties of Pennsylvania, Maryland and Virginia, which will indirectly derive advantage from the canal, nor the state of Illinois, nor the Michigan territory.

The twenty-six above counties form together an extent of territory of about fifteen millions of acres, of which the greater part presents a rich limestone soil, while the less productive remainder is covered with excellent timber, and contains inexhaustible mines of coal and of iron. We estimate the mean value of the acre at four dollars, which, for fifteen millions, gives a total value of \$60,000,000.

Now, if we take into consideration the actual state of depreciation of these lands, owing in part to the difficulty of transporting their products to an advantageous market, we cannot doubt but that the canal, in removing this obstacle, will give immediately to these lands an increase of value, a necessary result of the increase of value of the products. We will suppose it to be 20 per cent., which will give, for the twenty-six counties, \$12,000,000.

The three states above mentioned, offer an extent of 72,000,000 acres, of which the fertility is so great, that it will perhaps support, at a future day, a denser population than any other part of the Union. A recent assessment fixes \$2.49 per acre as the mean value of land in the state of Ohio. We will take \$2 for that of the three states, which gives, for the mean value of 72,000,000 of acres of their territory, \$144,000,000.

As soon as the canal shall be in operation, every part of these states finding another economic outlet to the ocean, not only will the exportation of their products be facilitated in a high degree, but these will also receive an increase of value resulting from the creation of a new market, which will obviate to the seller the inconvenience of glutting that of New Orleans, and thus placing him at the mercy of the purchaser. These products, although the same in quantity, will therefore acquire an augmentation of value, in which the lands must necessarily participate. We will suppose this increase of territorial value to be 12 per cent., which gives \$17,280,000.

In this increase of territorial value, we should include the District of Columbia, which, being at the termination of this important channel of trade, will be peculiarly favoured. This District is at present assessed at only \$15,000,000, which shows how much its property is depreciated. Combining this depreciation with the great advantages to result from its being the outlet of the canal, we adopt here fifty per cent. for the probable increase of its property, which will give \$7,500,000.

The summary of the augmentation of value of landed property, or the gain made by the owners of real estate, in consequence of the opening of the canal, will therefore be:

For the counties adjacent to the line of the canal,	\$12,000,000
For the states directly favoured by the canal,	17,280,000
For the District of Columbia,	7,500,000
	<hr/> \$36,780,000

Conclusion. At the moment of opening the navigation of the canal, the proprietors of real property will gain together a value equal to one and a half times the whole expense of the construction of the canal, (which is \$22,000,000,) and equal to three times the expense of construction of only the Eastern and Western sections together, (which is \$12,000,000.)

We should here remark, that the Union owns, in the states of Ohio, Indiana and Illinois, and the Michigan territory, 59,998,000 acres of land, besides 18,946,000 acres not yet ceded: valuing the first at \$2, we have \$119,996,000; and, supposing only ten per cent. for the augmentation of value they will receive, we find the Union, as landholder, will gain about \$12,000,000 by the opening of the canal: to which should be added the land owned by the government in the District of Columbia.

Let us now consider what will be the advantages

obtained by the increase of products created, and brought into value by the opening of the canal.

It is proper to remark, that the canal, before being entirely completed from Georgetown to Pittsburgh, will still give successive results from the very commencement of its construction: for, while the work will advance, on the one side from Pittsburgh, and on the other from Georgetown, the distance of transportation by land between these two places will diminish annually; and, particularly on the Eastern section, each portion, when finished, from one tributary of the Potomac to the other, will place the valley of this tributary in communication with the ocean. Thus, each portion as soon as built, will successively produce a partial result, and will afford advantages which will indemnify, if not entirely, at least in part, the expenses incurred from year to year: although it will only be when the whole line shall be completed, that the canal, being brought into full operation, will produce the complete results for which it is destined. It is only for this period that the following calculations are made.

The articles exported at the present time, by the districts under consideration, may be divided into two classes: 1st. Those produced by agricultural and manufacturing industry; 2d. Those which are in some measure immediately afforded by the soil itself.

The first class consists of *wheat, corn, flour and meal, rye, tobacco, hemp, flax, flaxseed, beef, pork, bacon, lard, tallow, whiskey, iron, glass, &c.*

The second class consists of *coal, lime, timber, plank, boards, slate, marble, freestone, &c.*

The annual amount of exportation of the articles of the first class has been differently estimated at different periods: 275,000 tons have been considered as a minimum, and 390,000 as a maximum. We will adopt 350,000 tons, which, at the moderate valuation of sixty dollars per ton, gives \$21,000,000.

These exportations together comprise those made to New Orleans, and those made to the Atlantic by the Potomac and land communications. It is certain that the facility of transport offered by the canal will increase the amount of these exportations; that is to say, will cause an increase of production. In fact, if the Mississippi is the outlet of the states above enumerated, to the Gulf of Mexico, the Chesapeake and Ohio Canal will become their outlet to the Chesapeake. These states, thus having two water communications for the exportation of their products, these last must annually increase in quantity, and we should say in value also, as they will then have the choice of the most advantageous market. What will be the annual augmentation of these products? Conjecture is all that we can here offer; and in assuming it at five per cent. we believe that we are far within the truth.

This being established, and \$21,000,000 being the value of products at the present time, if we examine what it will be at the time of the canal's going into operation, (and it will certainly increase with the population during the construction of the canal,) we find by calculation, that at the rate of 5 per cent. per annum, the sum of the successive augmentations during the six first years, will be \$23,977,170, the augmentation of the sixth year alone being \$7,141,005.

This sum of \$23,977,170, representing the sum of the increase of products for six years, is a creation which belongs entirely to the canal, and which, without it, would not exist: it is about two millions above the expense of construction of the whole canal, and nearly the double of the expense of construction of the Eastern and Western sections together.

As regards the products of the second class, such as *coal, lime, timber, &c.* their great weight, and the want of economical communications to bring them into market on such terms that they may compete in price, combine together to render their present

value, so to express it, null. Their exportation, and consequently their value, will be another creation of the canal; a creation which must be considered the more important, when we reflect on the powerful influence exerted over manufacturing industry by a single one of these articles, namely, *coal*. It is difficult to calculate in anticipation, what will be the annual consumption of this material, the inexhaustible source of public riches and of private economy; but, if we consider that the counties on the Potomac, the District of Columbia, the population of Baltimore, and the iron works in its vicinity, will extensively use it, we do not think that during the first years its annual consumption will be less than 150,000 tons. In fact, the population alone of these counties and of the District, amounts to 314,624 inhabitants, and our supposition only allows half a ton for each inhabitant, while the proportion admitted for large cities, which make an extensive use of this fuel, is 1½ of a ton for each inhabitant.

Now, estimating the ton at seven dollars, the 150,000 tons give \$1,050,000 for one year, and six years \$6,300,000.

As to the article of lime, the mere fact, that at Washington City, for want of economical communications, the lime used is brought from Rhode Island, shows that this article will acquire from the canal a value of which it is entirely deprived at the present time, as an object of exportation.

The same observation will apply to the timber, of all kinds, which the valleys of the Potomac, and of the Youhagany, and the ridges which they traverse, offer in abundance.

We will suppose, merely from conjecture, that the articles composing the second class alone, exclusive of coal, will receive a value created by the canal equal to 120,000 dollars per year, or for six years \$720,000.

In summing up the augmentation of products of the articles thus enumerated, we have—

For the articles of the first class,	\$23,977,170
For those of the 2d—Coal,	6,300,000
Lime, timber, &c.	720,000

Total for six years, \$30,997,170

But this creation of products, of which the transportation and exportation will take place from West to East, will cause in itself an increase of return trade, which would not exist if the canal itself did not exist. This trade may be divided into two classes of merchandise: the one composed of domestic manufactures, the other of foreign manufactures. The proportion between the amount of these two classes can only be fixed in a conjectural manner; and we will adopt here, for the former, the third, and for the latter, the two-thirds, of the value of the exportation (from West to East, of the articles of the first class only. Thus the third, of \$23,977,170, or \$7,992,390, will form another source of domestic wealth created by the canal, and in which our fisheries would form an important item. This sum, added to that of \$30,997,170, gives \$38,989,560.

Conclusion. Six years after the canal shall have been in operation, the augmentation of the products created by the canal, or which amounts to the same, the advantages obtained by the producers, presents a value equal to one and three-fourths times the whole expense of construction, and more than three times the expense of the Eastern and Western sections taken together.

If the public treasury will derive certain advantage by the influence which the canal will have on the augmentation of the value of the lands belonging to the Union, it will also receive others full as certain, by the increase of products exported abroad.

We have just estimated these at two-thirds of the total quantity of the products of the first class created by the canal; that is to say, the two-thirds of

\$23,977,170, or for the six years which will follow the opening of the navigation at \$15,984,780.

But the duty received on imports being valued at 25 per cent. of domestic products exported, it follows that the treasury will receive \$3,996,195, during the six years following the completion of the canal; an amount entirely due to this work, and belonging to its creation.

Conclusion. Adding the preceding sum to that of \$12,000,000 presented above, as the increase of the value of land, it follows, from these computations, that the Union is interested for about \$16,000,000, in the accomplishment of the Chesapeake and Ohio Canal; a sum which is more than the two-thirds of the total expense of the construction of this work, and one and one-third times the expense of the Eastern and Western sections taken together.

It is proper here to observe that, if the revenue of the Union, arising in time of peace almost exclusively from the customs, is sufficient to meet the expenses of government, it will probably become inadequate to this object in time of war, when it will become indispensable to have recourse to internal taxes. The Union will, therefore, find in the improvements due to the existence of the canal, important resources, the value of which is not included in the present computation.

Another item in favour of the Union, which has also been omitted in this computation, is the increase of the number of sailors which must naturally result from the increase of the amount of exports, and thus extend the nursery of the defenders of its flag. These exportations amounting, as shown above, to \$15,984,780, which, at the rate of 60 dollars per ton, (price adopted in these computations,) would make 266,419 tons, during the six years following the opening of the canal; the sixth year would give, by this valuation, 79,344 tons, which, on the supposition of two voyages being made in a year, would cause an increase of shipping of about 50,000 tons, and of 2,000 sailors, supposing, as a mean, 4 sailors required for each 100 tons.

To all the benefits which have just been enumerated, we should add those arising to commerce and to the carrying business: we will suppose them together to be six per cent. on the total value of the articles of the first and second class, of which the amount is \$30,997,170; this item will thus be, for six years, \$1,859,830.

Limiting to the above objects our estimates of the physical and national advantages which, at the end of six years, will be owing to the Chesapeake and Ohio Canal, we will here present the summary of the same:

Augmentation in the value of lands, or benefit derived by the owners of real property	\$6,780,000
Total of successive augmentations of the value of the products during six years or advantages obtained by the producers	38,989,560
Total of successive augmentations by the revenue of the customs, during the same period	3,996,195
Benefits derived to commerce and the carrying business together, and for six years	1,859,830
	<hr/> \$81,625,585

Conclusion. Thus, supposing even that the augmentation of the value of land, at the rate at which we have reckoned it, should not be completely realized until six years after the opening of the canal, the general benefits of public and private economy will amount together to more than \$81,000,000. This sum is equal to three and three-fourths times the whole expense of the construction of the canal, and to six and two-thirds times the expense of the Eastern and Western sections taken together. Con-

sequently, in a national point of view, even should the Chesapeake and Ohio Canal afford no revenue in itself, and its tolls be so regulated as to pay only the annual expense of repairs and superintendence, the physical advantages which would result from its accomplishment would far exceed the expense in which it would have involved; in fact, a few years only would be sufficient to produce an equivalent to the capital employed in the erection of the work. If we add to all these considerations, the spirit of enterprise, which is the characteristic of the population of our country; the rapid increase of this population; the fertility of the districts more peculiarly interested in this great work, and the variety of their productions, the most cool and sceptical mind will be obliged to confess that the future will undoubtedly present results far beyond those which these calculations can offer by anticipation.

As regards the probable revenue, strictly so called, of the canal, although it be not, in the present case, an essential point, nevertheless, in fixing the rate of tolls at an even moderate scale, they will be sufficient, from the first years, to afford a reasonable interest for the capital employed in the construction of the work; an interest which will thereafter progressively increase with the population and the developments of industry produced by the existence of such an outlet to the ocean. We should also remark, that even before the completion of the work, each portion, as successively finished, will immediately produce a revenue which will afford, if not an entire, at least a partial interest, for the capital employed in the construction of such respective portions. but it will be only after the entire completion of the work, and its going into active operation, that we may hope to derive an interest which will bear an advantageous relation to the capital. It is, therefore, only for this period that the following calculations are made.

We have seen above, that at the present time, 350,000 tons have been considered as a mean estimate of exports made, both to New Orleans and to the Atlantic ports, from the districts peculiarly interested in the Chesapeake and Ohio Canal. We will suppose that the third only of this amount, or 116,666 tons, will take the course of the canal, which, for six years, will give tons, 699,996

The increase of products of the first class, reckoned above at \$23,977,170 for six years, represents, at the rate of 60 dollars per ton,	399,619
Coal, at the rate of 150,000 tons per year, and for six years,	900,000
Lime, timber, boards, &c. for six years,	24,000

Total per six years, for the trade from West to East,	tons, 2,023,615
To this should be added the tonnage of the return trade; on the Erie canal it is estimated at one-fifth of the descending trade; we will here suppose it to be one-tenth,	202,361

Total of the tonnage of the trade in both directions, during the six first years,	tons, 2,225,976
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Which, at the mean rate of 14 cents per ton per mile, and for a mean distance of 200 miles, would give, for the tolls of the first six years together,

To which must be added the tolls on the boats returning empty, and of which the tonnage amounts to 1,821,254 tons, which, at the rate of one-tenth of a cent per mile, and for 200 miles, will give	\$6,777,928
	<hr/> \$64,250

Total of tolls, during the first six years taken together,	\$7,042,178
Which makes, for a mean year,	1,173,696

A revenue which is 5 per cent. of the total expense of the construction of the canal, but which must be reduced to 3½ per cent. as 1½ per cent. must be deducted for the repair and superintendence of the work. This same revenue is 10 per cent. of the expense of construction of the Eastern and Western sections together, or 8½ per cent. after deducting 1½ per cent. for repair and superintendence.

We should here notice, that this low rate adopted for repair and superintendence, can only be admitted on the supposition of the canal being, in the first instance, solidly built; if it were otherwise, the expense of repairs would be considerable, and would consume the greatest part of the revenue, on account of the peculiar exposure to violent causes of accident to which this work is liable.

But having taken a mean year of revenue among the six first years, let us examine what the revenue will be for the seventh year.

We have, for the present trade towards the Atlantic, either by the Potomac, or by the great roads, per year, as above, tons, 116,666

For the increase of products belonging to the seventh year, for \$8,548,055, at the rate of one ton for \$60,	142,467
Coal for one year,	150,000
Lime, timber, boards, &c. for one year,	4,000

One-tenth for the return trade,	tons, 413,133
	<hr/> 41,313

Total,	454,446
These 454,446 tons, at the rate of 1½ cents per ton per mile, and for a mean distance of 200 miles, will produce a revenue of	\$1,363,338

For the boats returning empty, and whose tonnage will amount to 371,820 tons, at the rate of one-tenth of a cent per mile per ton for 200 miles, gives

Total of tolls for the seventh year,	\$1,497,702
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This revenue of the seventh year is 6½ per cent. of the whole expense of construction of the entire canal, and 5 per cent. after deducting 1½ per cent. for the expense of repairs and superintendence.

The same revenue is 12 per cent. of the expense of the Eastern and Western sections taken together, and 10½ per cent. after deducting 1½ per cent. for repairs and superintendence.

Let us now examine what will be the revenue for the maximum of trade of which the canal is susceptible.

We have seen, in that part of this report which relates to the Middle section, that 29,800 boats should be considered (regard being had to the supplies of water, and to the loss of time ensuing from the passage through the tunnel,) as the maximum of commerce from West to East, and from East to West, taken together. 14,400 loaded boats will pass from the West; and 14,400 will pass from the East, which from the supposition above made, will be only one-tenth loaded. There will, therefore, pass by the summit level, in a year, that is, during the eight months of navigation, 15,840 loaded boats, and 12,960 return boats not loaded. The boat which we adopt to navigate this canal will displace about 90 tons weight of water, drawing three feet of water, and will carry a burden of 60 tons.

The 15,840 loaded boats will consequently carry 950,400 tons; and, as the question here refers to the maximum of trade passing by the summit level, we must admit that these boats will navigate the entire line of the canal, and that they will pay toll for 342 miles, which, at the rate of 14 cents per mile, will give

The 12,960 empty boats, representing 777,600 tons, will make the same passage as above, but will pay only one-	\$4,875,552
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tenth of a cent per ton per mile, which will give 265,939

As to the trade of the Eastern section alone, in supposing it to be only 300,000 tons in both directions, namely 120,000 tons for the articles of the first and second classes, coal excepted, & 150,000 tons for coal, total 270,000 tons—to which adding one-tenth for the return trade, gives 297,000 tons, or, in round numbers, 300,000 tons: it will therefore produce, at $1\frac{1}{2}$ cents per ton per mile, and for a mean distance of 90 miles, 405,000

For the nine tenths of 300,000 tons, or 270,000 tons for the boats returning empty, at the rate of one-tenth of a cent per ton per mile, and for 90 miles mean distance, 24,300

Total of the annual revenue of the canal, when its trade, by the increase of population, and the action of the canal itself, combined, shall have reached its maximum, \$5,570,791

Thus, at this period, four years of revenue of the canal will cover the whole expense of its construction.

As to what regards the total value of the maximum of trade which can be borne on the canal, we can offer nothing more than conjectures, and in such case the field is vast: therefore, we are far from pretending to offer here any result which can be considered as within reasonable limits of exactness. We have, therefore, but some views of a very general nature to submit on this point.

The maximum of annual trade, from West to East, according to the calculations above, will consist—

1st. Of 14,400 boats, carrying each 60 tons, and together, tons, 864,000

2d. Of 120,000 tons for the Eastern section, of the products of the first and second class, coal excepted, 120,000

Total, tons, 984,000

Which, at the rate of sixty dollars per ton, price adopted in the preceding calculations, will give \$59,040,000

3d. Of 150,000 tons of coal, at the rate of 7 dollars each, 1,050,000

Total of the maximum of annual trade which can pass from West to East on the canal, \$60,090,000

And as the trade from East to West, or the return trade, may be supposed equal in value to the above, or to 60,090,000

It follows that the maximum of trade which can pass in both directions, will be, in one year, \$120,180,000

Before terminating these considerations on the physical advantages produced by the canal, we think that, in strict justice to this work, we should submit the following observations, having for object to show, that the general results above presented are below the truth, and must be regarded as minimum quantities.

1st. All our calculations have been based on the population of the census of 1820, while, in strictness, they should have been made on the probable population which will exist at the period when the canal will go into operation. But, in supposing that the canal be commenced in 1827, it can scarcely be completed before 1838: at this period, our population, at the present rate of increase, will be above one-half more than it was in 1820.

2d. We have not taken into account the contem-

plated canal from Pittsburg to Lake Erie, and which may be considered the continuation of the Chesapeake and Ohio Canal, as far this lake. The Chesapeake being then united with Lake Erie by a water communication of about 460 miles in extent, (a distance nearly equal to that from the port of Erie to Albany,) all the territory bordering on the great lakes, with the exception of Ontario, must participate in the trade of the Chesapeake and Ohio Canal. Combined with this work, the Ohio and Erie Canal would have offered results much more favourable than those we have presented, in the comparisons which we have made between the expense of construction, on the one hand, and, on the other, the augmentation of territorial value; the successive increase of products; the extension of trade, both inland and foreign; and the revenue, strictly so called, of the work. These results would have been by so much the more advantageous, as, taking an equal distance, the Ohio and Erie Canal will be much less expensive than the Chesapeake and Ohio Canal.

3d. Neither have we spoken, by anticipation, of the advantages to be afforded to this work by the proposed canal from Georgetown to Baltimore, and of which the surveys, at present in execution, promise the most favourable results.

4th. In the estimation of the return trade, one-fifth would have been nearer to the truth than one-tenth; but, in adopting this last proportion, our object has been to keep ourselves, as to the revenue of the canal, as near as possible to the minimum.

5th. Finally, in all our computations, we have taken care to compare, separately, the expense of construction of the whole canal, and that of the Eastern and Western sections taken together. Our object in thus proceeding, was, to show how unfavourable to the different results was the Middle section, which, being only the fifth part of the length of the canal, still counts for five-elevenths of the expense of the whole. Our object has also been to show how desirable it is that proper investigations should be made to determine, as has been before suggested in this report, the comparative advantage between a canal and a railway, to connect Cumberland with the mouth of Casselman's river.

Before leaving this subject, we hope to be permitted to express our acknowledgements to General Walter Smith, of Georgetown, D. C. for the zeal and care with which he has kindly furnished us with data which were indispensable for forming the foregoing calculations. Without these data, it would have been impossible to have given to this subject of our report the extent which its importance deserves.

Having terminated this rapid view of the physical advantages offered by the Chesapeake and Ohio Canal, it only remains for us, in conclusion, to submit some ideas on the other advantages which will result from the execution of this work.

One of the most important results of the acquisition of Louisiana, has been, to afford to the country West of the Alleghany, an outlet to the sea. The tide of emigration then flowed towards those fertile regions, and their population now increases with a rapidity to which no other country can furnish a parallel. Already a part of this population finding itself placed at too great a distance from the Gulf, and the amount of its productions being considerable, demands new outlets: that by the Mississippi is not sufficient for them; they require more. A chain of mountains of secondary rank, such as the Alleghanies, cannot bar the progress of a nation so enterprising as ours, and still less darken the future prospects of this great federal empire. This chain should be broken at every point where it is practicable, and the most prudent policy appears to be to hasten in the execution.

The state of New York, in turning this chain to the north, has shown the first example; and while, in reward of its enterprize, its prosperity advances

with rapid strides, the illustrious citizen whose elevated views especially advanced this great work, has enrolled his name on the list of the benefactors of his country.

But scarcely has this communication through the state of New York gone into entire and active operation, before it is perceived that, in a short time, it will not be sufficient to satisfy the demands made upon it. Thus, a few years will have sufficed to produce results which exceed what the most sanguine hopes could have anticipated. This fact, taken alone, proves that new communications will become indispensable.

New York, and New Orleans, are, at the present time, the only points towards which the products of the West can be economically directed. But, these two points, placed, the one to the North, the other to the South, have each a certain sphere of action, which cannot extend beyond certain limits; and there remains between their respective commercial range, if we may use this expression, a large extent of our territory, which, on account of its too great distance from each of these emporiums, is unable to transport its products to them, with profit.

These portions of our territory include, more particularly, the states of Tennessee, Kentucky, Ohio, Indiana, and Illinois, and the Michigan territory; to these we might have added the western parts of Virginia and Pennsylvania. But, limiting ourselves to the states and territory cited, we find an extent of 250,000 square miles of fertile country, whose population amounted, in 1800, to 377,567, and in 1820, to 1,779,949. These states, if deprived of economical communication with the ocean, cannot attain a reasonable degree of commercial prosperity; with the exception of cotton, they all cultivate nearly the same productions, and consequently they cannot possess an internal trade among themselves of much activity; it is only by exporting these productions that they can, in this respect, contribute to, and participate in, the whole prosperity of the union.

In such a state of things, the question of policy is not, it seems to us, to know if these communications will be profitable; but, in fact, to ascertain if the number of those which are practicable, will be sufficient. We will observe, on this point, that this extent of 250,000 square miles, is at least equal to the kingdoms of France and the Netherlands taken together, of which the population is not less than 35 millions of inhabitants. These two wealthy kingdoms possess, together, a development of coast of 2,200 miles, besides eight large navigable rivers, which form a communication between the interior of the country and the ocean. The Western states referred to, may be considered as capable to support, at a future day, a population equal to that of those kingdoms. The great fertility of the soil, and the commercial enterprize which characterizes our population, leave no doubt on this head; and if proofs were, however, necessary, we need only to recollect, that at the present time, when our manufactures are yet in their infancy, our inland trade is already the third in amount of that of France, while our foreign trade is equal to that of this fine kingdom. These states will, therefore, require a certain number of outlets to facilitate the exportation of all their products, and the importation of the returns; and it is doubtful if even four of these outlets will be found practicable between the Juniata and the Savannah river, even by the combination of canals and rail-ways. Thus, instead of fearing that these communications will not be profitable, we should rather apprehend that, at a future day, they will be found insufficient for the passage of the trade between the West and the East. The insurmountable obstacles opposed by nature are thus the only ones which should limit our efforts; for, the more economical outlets we can open through this chain, the more will the resources of the West develop themselves, and the more will the East and the West

become united by indissoluble bonds of a common interest.

Among these outlets, the Chesapeake and Ohio Canal holds a conspicuous rank; its degree of practicability is well settled; the relations between the expense of its construction and its physical advantages, have been established, we trust, in a satisfactory manner; but it also offers other advantages, which it is important to enumerate.

It opens into the Chesapeake, whose central situation on our Atlantic coast is equally favourable for its trade with the south or with the north; and while, in time of war, this trade will find protection behind the ægis of our naval forces in Hampton Roads, the canal will assure to our maritime establishments in this quarter, abundant resources of every kind; a circumstance which will associate still more intimately the regions of the West with our destinies on the ocean. These naval establishments will also be placed in communication with Pittsburg, a city destined to become the great manufacturing emporium of the West, and of which the different branches of industry will be of the greatest importance for naval supplies.

The Chesapeake and Ohio Canal also enjoys, in common with all those which can be made to traverse the ridge of the Alleghany, the inestimable advantage of furnishing to the states and territories whose exportations and importations are made through the Mississippi, a safe communication with the sea, in case the circumstances of war should close or render dangerous the passage by the mouth of this great artery of the regions of the West. In order properly to appreciate the value of such an advantage, it is proper here to observe, that the coast of Louisiana does not offer any position from which our fleets can, in an effectual manner, protect the outlet of the Mississippi into the Gulf. The coast itself of Louisiana will soon be invulnerable, but the opening of this great river will remain always exposed to blockade as a commercial outlet. The fate of Cuba is yet uncertain, and our establishments at Pensacola, unfortunately, are not of a nature to admit vessels of the first classes. Thus, it is not sufficient to have defended the coast of Louisiana, and to have ensured the possession of the Delta of the Mississippi: it is also necessary to assure to the valley of this noble river, lateral outlets to the ocean. Without such outlets, the commerce of extensive districts may, in the course of events, become, as it were, entirely paralyzed, and the consequences would be beyond all description.

The Chesapeake and Ohio Canal not only offers the shortest outlet between the Ohio and the Atlantic, but also, connected with the contemplated canal from Pittsburg to Lake Erie, it will afford a direct communication between the upper lakes and the ocean, and will form a military line of operations which cannot, in any circumstances, be cut off or intercepted. This line will join the centre of our northern with the centre of our Atlantic frontier, and with the capital of the Union. In time of war, it will give every facility to concentrate, rapidly and economically, on either of these frontiers, troops and military supplies of every kind; and thus will give them, particularly the northern frontier, a degree of strength which expensive works of defence could not procure.

Such are the principal considerations which, in our humble opinion, have appeared to us proper to demonstrate the degree of importance of the great work which forms the subject of the present report. All which is respectfully submitted.

S. BERNARD, *Brig. Gen.*

Member of the Board of Internal Improvements

WM. TELL POUSSIN, *Capt. Top. Eng.*

Assistant to the Board.

WILLIAM HOWARD, *Civil Eng.*

Assistant to the Board.

Washington City, Oct. 23, 1826.

AGRICULTURE.

ON GENTLEMAN FARMING.

(From Lorain's Husbandry.)

Remarks on the gentleman's country establishment, and a more economical management proposed.

[Concluded from page 356.]

Where land is cheap and population thin, boggy and springy places should be sown in herdgrass and remain in it, even if it should spoil the looks of a field, or of every field on the farm. Profit ought to be the farmer's aim: therefore, it matters not how his fields look, if at the end of the year, the balance of his profit and loss account book looks well; particularly, as he has no cause to complain of the boggy or springy places, as they have furnished him with good hay, and no longer mire his cattle when pastured in the fields. Where land is high and labour plenty, the gentleman may sow such places with the same grass, and let them remain in it until he is well informed in the art of draining. Although we have some excellent writings on that subject in this country, it is far from being practically understood. As it is very difficult to cut off the springs judiciously without practical experience, a great deal of money may be readily spent in draining, to but very little purpose; particularly in under draining. Where the excess of moisture does not proceed from springs, this expense may be avoided, and the superfluous moisture more effectually run off, by a proper system of cultivation alone.

When stumps are fast in the ground, removing them by grubbing is very expensive, and should never be done. The screw invented in England for blowing them to pieces with gunpowder, may answer in that country where labour is cheap, and the wood may be advantageously used for fuel: provided the stump be sound; for when it is otherwise, or cracked by the falling of the tree, or in any other way, the blast is commonly ineffectual. Stumps have been removed in the Eastern states with great facility, by what is called here the Yankee lever. It is represented to be a simple piece of timber, with canthooks so fixed in the middle of it as to grasp the stump; a powerful yoke of oxen is attached to each end of the lever, and these, by moving in contrary directions, it is said, and in a way that seems to leave no cause for doubt, quickly extracts the stump.* However, I advise the gentleman not to attempt even this mode of extracting stumps, unless he can procure workmen who are practically acquainted with the business, and cattle that are calculated to effect the purpose. When the roots have become sufficiently decayed for a pair of oxen to draw out the stump, by a log chain hitched round the upper part of it, a great many may be taken up in the course of one day, and with but very little expense.

Blowing rocks which stand above the surface of the soil, is very expensive; especially if they do not split freely. Filling the holes with the earth around them, injures the soil, and if earth and soil be hauled for this purpose, which seems to be the best way, it is expensive. Although the plain practical farmers are in the practice, it is a doubtful one, for none but the wealthy encounter it, and the principal part of the labour is done at leisure times, by themselves and family: consequently they neither feel nor estimate the expense: I therefore, advise the gentleman not to engage in it until he can accurately calculate the expense and compare it with the improvement. If this be done, it seems proba-

* When the stump is large and very fast in the ground, two pair of powerful oxen hitched to each end of the lever do not seem to be too many, if enough, provided the roots be sound.

ble that he will not encounter this business until he becomes well acquainted with it, and can hire a blaster whom he knows to be expert; otherwise much time and powder may be expended to but very little purpose. He should also have some valuable use for the stone, or sell it to some person who will haul it off the field, for even this alone is expensive. Surface stones must be removed, or the grounds cannot be mowed. Concealed stones near the surface of the soil, occasion tedious and bad ploughing, soon dull the irons, and sometimes break the plough: still the gentleman had better not commence the removal of them until he has been a year or two on the farm, for it requires well formed plans to effect even this without considerable useless expense. The larger stones got in this way, and gathered from the surface, may be either sold or reserved for building, and the smaller ones applied to stop the washings which run into the gullies, or mend the roads, or may be reserved for under draining, or hauled into the quarries.

When a fence is run between the woods and the fields, the practice of cutting off the communication of the roots of the trees, with the cleared grounds, is attended with but little extra expense where timber is valuable. The bank and ditch save two rails in each panel, also something in the length of the post, and the roots of the trees exhaust the field and injure the crops. But after some time, the roots grow downward a little within the surface of the soil, and cross the bottom of it, and mounting upward, find their way into the field without being seen. However, by cutting them off occasionally on each side of the bottom of the ditch, they may be prevented from doing any very serious injury to the field. In doing this, care should be taken not to make the ditch any deeper than it was at first. It has been observed that the roots of trees cross very deep gullies in the same way as they cross the ditches: therefore, no good, but much evil will arise from making the ditches deeper, every time it becomes necessary to cut off the roots in the bottom of them.

The late plentiful introduction of Merino sheep, will terminate as a very great advantage to this country; provided this animal be not despised and neglected, because its valuable properties fall so very far short of realizing the golden dreams of infatuated speculators. Their compact form and close pile of wool, or some other cause or causes, render them, or even a mixed breed with them and the common sheep of the country, much harder than the latter. They will thrive on the same food and usage that common sheep fall away on; are more readily fattened, and much less subject to disease. Their wool also sells at a much higher price. Still, common sense dictates, that the price of them must ultimately terminate in the value of the materials of which they are composed. This might have been as clearly seen before the ill judged speculation in these animals took place, as at the present or any future time. Yet if they had actually possessed the golden fleece prefigured to us on sign posts, or some other properties equally productive, more could scarcely have been said of their value; or more industriously propagated in almost every possible way, by interested speculators; or by gentlemen whose imaginations were as highly inflamed by the enthusiastic dreams of profit, as were those who ran crazy when the mania for the hank scrip prevailed. Formerly, large animals were the object of speculation. Now, form, bone, and a disposition to fatten freely, take the lead. The latter seems to have reason on its side; and it may be readily effected by judicious mixtures of the various forms and properties so very conspicuous in different animals of the same kind; and no question but the value of every kind may be greatly enhanced in this way. It is, however, doubtful whether the ingenuity of the cattle jockies will permit this im-

Those unacquainted with the facts might be led to believe, by some remarks in the Boston memorial, that there is not wool enough raised in this country to supply the present demand of our factories. This is not the fact. There is now raised in this country wool of all descriptions, from that of a quality as fine as any in the world to the coarsest, a quantity sufficient for the consumption of all the factories now erected; and it is no less a fact, that in consequence of the large importations of the article from foreign markets, it has reduced the price of the article to such a degree, that the farmer cannot afford to raise it: more than that, it may be estimated safely, that more than one half of the last year's crop is in the hands of the farmer, and cannot be sold even at these low prices. Such being the facts, both the wool grower and the manufacturer want encouragement. While England is shutting the ports of her colonies against our trade, would it not be wise policy in our government, in a measure at least, to prohibit the importation from her dominions, of such articles as we can raise and manufacture within ourselves. We have in our country as fine sheep as there is in the world, which will be increased in any proportion to the demand for wool, provided there is sufficient encouragement given. But the present prices of wool will drive them to the slaughter; they will not be kept by the farmer, for to raise wool under these circumstances is certain ruin.

All of the New England, the middle, and most of the western states, would be directly benefitted by a large increase of duty, both on imported wool and woollen cloths; and it is presumed that every individual in all of the other states would be more or less indirectly benefitted by such a course of policy.

It is as important that we raise the raw material, as that we manufacture it; for in case of war, the time that we most need woollen factories, they would have to cease to operate for the want of the raw material, unless raised in this country. Let them both be encouraged, and millions of dollars would be annually saved in this country by the measure; and the country would be greatly enriched thereby, and no one injured. Now is the time for Congress to act. A duty from 45 to 50 per cent. both on imported wool and woollen cloths, would set the machinery of our woollen factories in motion, and save millions of fine sheep from the hands of the butcher. Let the experiment be tried;—Our factories would soon accumulate, and wool of all descriptions would at all times be raised to a sufficient extent for their consumption, to manufacture cloth enough, to supply the demand of this country; and the competition would be such (as is the case with cotton goods) as to keep the article down to such a moderate price as barely to give the wool grower and the manufacturer a small living profit, and no American citizen would be the sufferer by it; but on the contrary, every individual in this great republic would be benefitted by the universal and public prosperity that would be secured to this country by so judicious a course.

CINCINNATUS.

THE CHESTNUT TREE.

Chestnuts grow wild in this country, but never equal those in size and perfection which are imported from Spain and Italy. In these countries they sometimes grow to an immense size, and the largest in the known world are those growing upon Mount Aetna, in Sicily. The most bulky of them is known by the name of, the chestnut tree for a hundred horses; and is one hundred and sixty feet in circumference, but quite hollow within. The people have built a house in the cavity of this enormous mass. At Tortworth, in Gloucestershire, Eng. there is a chestnut tree, fifty-two feet in circumference, which is probably nearly one thousand years old.

SPORTING OLIO.



FOX HUNTING.

Extract from a gentleman in the District of Columbia to another in Maryland, dated Jan. 27, 1827.

DEAR SIR—We will not fail to meet you on Monday, unless it blows a gale. We want you here where foxes are plenty, and the grounds good; and we must have you for a week, at least. Graeff expects us.

We rode out yesterday with the dogs, but more for the purpose of giving them exercise than hunting. In truth, I was anxious to see Spring run with our dogs. We unkenelled, but the fox must have been twenty minutes before the pack, and the scent lay badly. The pack, however, neared him in an hour; and the chase, for an hour or two more, was very animated. In crossing a large old field, he was compelled to seek shelter in the cover of some ravines, skulking from one ravine to another, and three times in a few minutes, in the hope of putting his pursuers at fault, he passed through the same parcel of hogs; and he was at last almost under the noses of the dogs.

Spring tried Juno at the st rt, and in a double she put Slim completely up; but neither would yield the lead. Before the chase ended, she, with two others, were thrown out;—and I might say almost as much of myself.

P. S.—The foxes from the Maryland side are crossing on the ice to the Virginia side.—This is good news for us.

SKATING.

The Montreal Herald states, that a few days since, a gentleman of Three Rivers, skated from that town to Berthier, a distance of forty five miles, in five hours. It is added, that on the 27th of Jan. 1824, Mr. Arilly Hart, son of Moses Hart, Esq., of Three Rivers, skated the same distance in four hours and forty three minutes.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 2, 1827.

TOBACCO.—Total amount of hogsheds inspected in the three State Warehouses, for the year 1826, viz: No. 1, 6300; No. 2, 5123; No. 3, 5456—17,079.

Hay, per ton, \$20; Rye Straw, do. \$14; Chop Rye, cwt. \$1 75; Oats, bush. 45 & 50 cts.; Corn, in ears, \$3.50 per bbl; Cut Straw, bush. 5 cts.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 80	9 00		
BACON, and Hams, . .	lb.	6	10	9	12
BEESE-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16½	20	22
Havana,	—	14	16		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	11½		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	15	16	16	18
Dipt,	—	11½	13½		16
CHEESE,	—	8½	12	12	16
FEATHERS, Live, . . .	—	30	32	37	
FISH, Herrings, Sus.	bbl.	2 37½			
Shad, trimmed, . . .	—	5 50	6 00		
FLAXSEED,	bush	1 00	1 10		
FLOUR, Superfine, city,	bbl.	5 50	5 75		
Fine,	—	5 25	5 50		
Susquehanna, superfi.	—				none
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	58	60		
white	—	58	60		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler, & Red, new	—	1 00	1 10		
do. Red, Susque. . .	—	1 05	1 10		
Rye,	—	75	80		
Barley, Eastern . . .	—	1 12½	1 22		
Do. country	—	90	1 00		
Clover Seed, Red . . .	bush	4 50	6 00	5 50	
Ruta Baga Seed, . . .	lb.	87		1 00	
Orchard Grass Seed, .	bush	3 50			none
Mangel Wurtzel Seed, .	—	1 25		1 50	
Timothy Seed,	—	4 00		5 00	
Oats,	—	45		50	
Beans, White,	—	1 25	1 37½	2 00	
HEMP, Russia, clean, .	ton	250	260		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	18		25	
HOGS' LARD,	—	9	10	12	
LEAD, Pig	lb.	6½	6½		
Bar	—	7½	8		
LEATHER, Soal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	30	32	37½	75
Havana, 1st qual. . .	—	6½		9	
NAILS, 6a20d.	lb.	1 50	1 62½		
NAVAL STORES, Tar, . .	—	1 75			
Pitch,	—	1 75			
Turpentine, Soft, . . .	—	33	34	40	
OIL, Whale, common, .	gal.	75	80	88	
Spermaceti, winter . .	—	11 50	12 00		
PORK, Baltimore Mess,	bbl	9 00	9 50		
do. Prime,	—	3 25			
PLASTER, cargo price,	ton.	1 60			
ground,	bbl.	3½	3½	5	
RICE, fresh,	lb.	12	14	18	20
SOAP, Baltimore White,	—	5½	8	10	12
Brown and yellow, . .	—	32	35	50	
WHISKEY, 1st proof, . .	gal.	75	1 00	1 25	
PEACH BRANDY, 4th pr	—	31	32	50	
APPLE BRANDY, 1st pr	—	12 50	13	14	16
SUGARS, Havana White,	c. lb.	10 00	10 50		
do. Brown,	—	8 00	9 10	10	11
Louisiana,	—	19	22	20	22
Loaf,	lb.	70		1 00	
SPICES, Cloves,	—	7	12	12	18
Ginger, Ground, . . .	—	15		25	
Pepper,	—	50		75	
SALT, St. Ubes,	bush	54		75	
Liverpool ground . . .	—	8 50		12	
SHOT, Balt. all sizes, .	clb.	2 50	3 00	3 50	4
WINES, Madeira, L. P.	gal.	1 10	1 15	1 50	2 00
do. Sicily,	—	1 05	1 10	1 50	1 75
Lisbon,	—	1 65	1 85	2 50	
Port, first quality, . .	—	30	35		
WOOL, Merino, full bld	lb.	20	22		
do. crossed,	—	18	22		
Common, Country, . .	—	20	25		
Skinnners' or Pulled, .	—				

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AGRICULTURE.

COAL ASHES—AS A MANURE.

MR. SKINNER.

Since the introduction of our native coal, or anthracite, into general use in our large towns, very large quantities of the ashes are accumulated, without having been applied, as far as I can learn, to any beneficial purposes of agriculture. In looking into some of the English works on this subject, I find the article of coal ashes mentioned as a species of manure, known by the agriculturists of that country. With a view to excite practical men in our own country to an examination of the subject, I annex extracts from two authors of reputation, in the hope that on further inquiry some useful information may be exhibited of the nature and efficacy of this substance, of which we have already an abundant supply, with a certainty of incalculable quantities in future.

Extracts from a modern work on agriculture, by R. W. Dickson, M. D., in 2 vols. Seco., entitled "*A Complete System of Modern Husbandry*," printed in London, 1813—2d edition. 1st vol p. 253.

"The ashes of pit coal, where they can be procured in sufficient quantities are, when applied as manure, found to be useful in many respects; but as these can contain saline matter only in proportion to the quantity of fresh vegetable products that may have been consumed along with them, little of the effect that is produced by them can depend upon it; much more probably arises from the proportion of calcareous earth which they contain. Something, too, in many cases, probably depends on the animal substances that may have occasionally been burnt, or afterwards mixed with them, before they are made use of as manure. They may also be serviceable on the stiffer sorts of soils, by rendering them more open and disposed to admit the roots of growing vegetables. That they may be beneficial in these ways seems to be shewn by their utility in the stiff clayey grounds from which brick earth has been dug, and on what are termed generally sour lands. On the more tenacious loamy soils they may operate by giving friability, and at the same time the calcareous principle, in a small degree, when it is sufficient. This is a conclusion which is further supported by their having been found from experience to be much less useful in the poorer sorts of land.

"By the application of these ashes in the vicinity of London to the stiff soil from which the brick earth has been taken, they render it sufficiently friable to afford a good crop of beans, a vegetable which, though it grows well on the heavy soils, could not otherwise be produced on lands so very stiff as the bottoms of brick grounds generally are found to be. After this crop has been taken, it is usually remarked that such grounds are in a condition to admit of grass seeds being sown with the succeeding crops. But, except in such cases as the above, this manure is probably the best adapted to grass lands as a top dressing; it may, however, occasionally be used in this way to the young grain crops. The proportions which may be necessary must be different, according to the intention of the farmer, the nature of the crop, and the state of the land."

Extract from a *Treatise on Manures*, by Richard Kirwan, Esq., F. R. S. &c., author of the *Elements of Mineralogy*—printed London, 1809. 7th edition, p. 17.

"Sifted coal ashes, those of peat, and white turf ashes, and wood ashes, have also been employed in many cases advantageously; they contain either the four primitive earths, as Mr. Bergman asserts, or calcareous earth chiefly, according to Achard; or

calcareous and magnesia, according to D'Arcet. They also contain some proportion of phosphorated selenite; i. e. calcareous earth united to the phosphoric acid. Almost all contain a small and variable proportion of common salt, Glauber's salt, and terrene salts; which, when in a small dose, all accelerate putrefaction; also small bits of charcoal."

When I recollect that I for several years obtained leached ashes, of which I used many thousands of bushels, from the soap boilers of Philadelphia, without paying any thing but the cartage and freight, so little was their virtue as a manure then known, I am not without a hope that some discoveries may be made of the efficacy of coal ashes in the improvement of our lands, that may serve to promote the use of that valuable article among us.

A SUBSCRIBER.

January 27, 1827.

(From the Cincinnati Gazette.)

TRANSMUTATION OF PLANTS.

"Knowledge is power."

The reading of an extract from an address of Dr. Darlington to the Chester county Cabinet of Natural Science, as published in a late number of the *American Farmer*, and furnished me by a particular friend, has induced me to recur to some notes I had made on the subject commented on by the Doctor in that extract. The extract is as follows:

"The vulgar error of the transmutation of wheat into *bromus* or cheat," (chess, goose-corn, &c. as known in different parts,) "is familiar to every one. Nay, there are some so strangely credulous as to imagine (I will not dignify the ——— (I cannot make out the word) with the name of belief,) that our cultivated flax is often changed into a plant, not only of a different genus, but of a remote class, wholly distinct in all its natural botanical characters. I allude to the *alysum sativum* of the botanists," &c.

I am not ready to yield a tacit assent to all the vulgar errors prevailing among farmers, though I am certain that at least some of them originate in the observance of facts very difficult to explain.—But in respect to wheat, and plants belonging to that genus, there appears to me to be a very palpable error pertinaciously adhered to among the learned, in the very *teeth* too of facts long and well observed among the most intelligent farmers. When I was not more than sixteen years of age, it was pointed out to me, and I observed with *inquisitive wonder*, that the spots in grain fields (of wheat and rye,) which had been *winter killed*, i. e. wet places where the freezing had destroyed the wheat, were often covered with rank crops of *cheat*, as regularly set as the wheat in other parts of the field. I carefully made memoranda, which in some years swelled to considerable extent, from which, in addition to the above, I offer you the following; which, if they should ever meet the eye of Doctor Darlington, and he become convinced of the truth of them, they must, I think, give to his mind an effect which he cannot but dignify with the name of *belief*.

1st. When a field, or portion of one, has, for a considerable part of a winter been exposed, without a covering of snow, in a latitude as high as 42°, the wheat or rye, may be so far killed as that nothing will appear but the common weeds, variously interspersed. But if the snow has been melted away, at an early period, the soil saturated with water and frozen so as to chrysalize (*honey-comb*), the surface to a few inches depth, cheat will be abundant, and little or no wheat, &c.

2d. A field of rye was sown on a gentle declivity, which appeared very promising in October. It was even and without spots. But in mending the roads a spring was turned into it for the purpose of enriching the soil, by the wash from the road. By

this the soil was rendered wet and moist to the width of three rods, or more, quite across the field, and during the winter, in which there was but little snow, it was frozen and chrysalized as above. At harvest there was an excellent crop of rye, except on the moistened and wet parts above mentioned, where there was produced a very stout crop of cheat. In the wet part there was scarcely a head of rye; but towards the edges, on that merely moistened, the rye was more or less prevalent, while in the rest of the field it would have been difficult to discover a single head of cheat.

3d. On my own farm, I had a piece of good arable land, rather dry; the timber on which had been cut off some years before I purchased it, and a young growth of white pine, hemlock, maple, and almost every other kind of hard wood common to the country. In June, I had the bushes all cut down in one direction, and they were so thick as to cover the surface to a considerable depth. I did this in order to obtain a *good burn* over the whole surface, on which the success of the first crop, in that country, materially depends. By accident, in a great drought, fire was communicated to it, and almost every stick on the whole (about two acres,) was consumed. I sowed it in autumn, with a particular kind of choice and clean wheat. The fire had so completely destroyed the seeds in the soil, that nothing, not even the *fire-weed*, grew on it, but the wheat, which being so clean and excellent, my neighbours besought me to let them harvest it for me, that they might obtain some of the seed. By this means the harvesting happened to be delayed until it was rather too ripe, and the ground was covered with wheat in every part too thick for common seeding. I nevertheless determined to plough it in, and try by this means for a second crop. But being disappointed, in help, the seed lay on the surface undisturbed, until a rain came, and it sprouted, took root and grew until the whole became as green as a meadow. I was at that time amusing myself on the question of the volition of plants, and having occasion every day to pass along the side of this ground, to visit some patients in that direction, I had full opportunity to observe the descent of the radicles, and the ascent of the plumules from the grains, in every position, so that I could not possibly be mistaken that it was really the wheat that germinated, and I began to hope for a small crop of wheat notwithstanding the want of culture. I even noticed the hulls of the wheat-grains, in the spring, still attached to the roots. But to my great mortification, at earing time, there was scarce an ear of wheat in five hundred; it was nearly all cheat, or *chess*, as it was there called. I was at a loss to account for this very palpable demonstration; but I recollected having read in some fragments of an old book I had some years before picked up, in a window of a publick house, that wheat, rye, &c. had two sets of roots, the lower produced in the fall, and the upper put forth in the spring, and I dug up a stool of wheat and another of rye, washed out the earth, and found them as the author had stated. Now, admitting that, as is probable, the stalk is killed down to the root in winter, would not the new shoot, if any, (and these could have but one set of roots, being on the surface,) springing from the root, be less perfect? I cannot say how it is; but for the above facts I can avouch the truth, and will add another which I heard several times repeated by a gentleman, on whose veracity I can, after more than twenty years acquaintance, implicitly reply—a man of very correct observation, and who possessed a degree of intelligence and information that seldom falls to the lot of a plain, practical farmer, as he was. He showed me a piece of land which he said he had sowed in oats, but by

*Something like this takes place with the Russia turnip.

AGRICULTURE.

COAL ASHES—AS A MANURE.

MR. SKINNER.

Since the introduction of our native coal, or anthracite, into general use in our large towns, very large quantities of the ashes are accumulated, without having been applied, as far as I can learn, to any beneficial purposes of agriculture. In looking into some of the English works on this subject, I find the article of coal ashes mentioned as a species of manure, known by the agriculturists of that country. With a view to excite practical men in our own country to an examination of the subject, I annex extracts from two authors of reputation, in the hope that on further inquiry some useful information may be exhibited of the nature and efficacy of this substance, of which we have already an abundant supply, with a certainty of incalculable quantities in future.

Extracts from a modern work on agriculture, by R. W. Dickson, M. D., in 2 vols. Seco., entitled "*A Complete System of Modern Husbandry*," printed in London, 1813—2d edition. 1st vol p. 253.

"The ashes of pit coal, where they can be procured in sufficient quantities are, when applied as manure, found to be useful in many respects; but as these can contain saline matter only in proportion to the quantity of fresh vegetable products that may have been consumed along with them, little of the effect that is produced by them can depend upon it; much more probably arises from the proportion of calcareous earth which they contain. Something, too, in many cases, probably depends on the animal substances that may have occasionally been burnt, or afterwards mixed with them, before they are made use of as manure. They may also be serviceable on the stiffer sorts of soils, by rendering them more open and disposed to admit the roots of growing vegetables. That they may be beneficial in these ways seems to be shewn by their utility in the stiff clayey grounds from which brick earth has been dug, and on what are termed generally sour lands. On the more tenacious loamy soils they may operate by giving friability, and at the same time the calcareous principle, in a small degree, when it is sufficient. This is a conclusion which is further supported by their having been found from experience to be much less useful in the poorer sorts of land.

"By the application of these ashes in the vicinity of London to the stiff soil from which the brick earth has been taken, they render it sufficiently friable to afford a good crop of beans, a vegetable which, though it grows well on the heavy soils, could not otherwise be produced on lands so very stiff as the bottoms of brick grounds generally are found to be. After this crop has been taken, it is usually remarked that such grounds are in a condition to admit of grass seeds being sown with the succeeding crops. But, except in such cases as the above, this manure is probably the best adapted to grass lands as a top dressing; it may, however, occasionally be used in this way to the young grain crops. The proportions which may be necessary must be different, according to the intention of the farmer, the nature of the crop, and the state of the land."

Extract from a Treatise on Manures, by Richard Kirwan, Esq., F. R. S. &c., author of the *Elements of Mineralogy*—printed London, 1809. 7th edition, p. 17.

"Sifted coal ashes, those of peat, and white turf ashes, and wood ashes, have also been employed in many cases advantageously; they contain either the four primitive earths, as Mr. Bergman asserts, or calcareous earth chiefly, according to Achard; or

calcareous and magnesia, according to D'Arcet. They also contain some proportion of phosphorated selenite; i. e. calcareous earth united to the phosphoric acid. Almost all contain a small and variable proportion of common salt, Glauber's salt, and terrene salts; which, when in a small dose, all accelerate putrefaction; also small bits of charcoal."

When I recollect that I for several years obtained leached ashes, of which I used many thousands of bushels, from the soap boilers of Philadelphia, without paying any thing but the cartage and freight, so little was their virtue as a manure then known, I am not without a hope that some discoveries may be made of the efficacy of coal ashes in the improvement of our lands, that may serve to promote the use of that valuable article among us.

A SUBSCRIBER.

January 27, 1827.

(From the Cincinnati Gazette.)

TRANSMUTATION OF PLANTS.

"Knowledge is power."

The reading of an extract from an address of Dr. Darlington to the Chester county Cabinet of Natural Science, as published in a late number of the *American Farmer*, and furnished me by a particular friend, has induced me to recur to some notes I had made on the subject commented on by the Doctor in that extract. The extract is as follows:

"The vulgar error of the transmutation of wheat into *bronnus* or cheat," (chess, goose-corn, &c. as known in different parts,) "is familiar to every one. Nay, there are some so strangely credulous as to imagine (I will not dignify the ——— (I cannot make out the word) with the name of belief,) that our cultivated flax is often changed into a plant, not only of a different genus, but of a remote class, wholly distinct in all its natural botanical characters. I allude to the *alysum sativum* of the botanists," &c.

I am not ready to yield a tacit assent to all the vulgar errors prevailing among farmers, though I am certain that at least some of them originate in the observance of facts very difficult to explain.—But in respect to wheat, and plants belonging to that genus, there appears to me to be a very palpable error pertinaciously adhered to among the learned, in the very teeth too of facts long and well observed among the most intelligent farmers. When I was not more than sixteen years of age, it was pointed out to me, and I observed with *inquisitive wonder*, that the spots in grain fields (of wheat and rye), which had been *winter killed*, i. e. wet places where the freezing had destroyed the wheat, were often covered with rank crops of *cheat*, as regularly set as the wheat in other parts of the field. I carefully made memoranda, which in some years swelled to considerable extent, from which, in addition to the above, I offer you the following; which, if they should ever meet the eye of Doctor Darlington, and he become convinced of the truth of them, they must, I think, give to his mind an effect which he cannot but dignify with the name of *belief*.

1st. When a field, or portion of one, has, for a considerable part of a winter been exposed, without a covering of snow, in a latitude as high as 42°, the wheat or rye, may be so far killed as that nothing will appear but the common weeds, variously interspersed. But if the snow has been melted away, at an early period, the soil saturated with water and frozen so as to chrysalize (*honey-comb*), the surface to a few inches depth, cheat will be abundant, and little or no wheat, &c.

2d. A field of rye was sown on a gentle declivity, which appeared very promising in October. It was even and without spots. But in mending the roads a spring was turned into it for the purpose of enriching the soil, by the wash from the road. By

this the soil was rendered wet and moist to the width of three rods, or more, quite across the field, and during the winter, in which there was but little snow, it was frozen and chrysalized as above. At harvest there was an excellent crop of rye, except on the moistened and wet parts above mentioned, where there was produced a very stout crop of cheat. In the wet part there was scarcely a head of rye; but towards the edges, on that merely moistened, the rye was more or less prevalent, while in the rest of the field it would have been difficult to discover a single head of cheat.

3d. On my own farm, I had a piece of good arable land, rather dry; the timber on which had been cut off some years before I purchased it, and a young growth of white pine, hemlock, maple, and almost every other kind of hard wood common to the country. In June, I had the bushes all cut down in one direction, and they were so thick as to cover the surface to a considerable depth. I did this in order to obtain a *good burn* over the whole surface, on which the success of the first crop, in that country, materially depends. By accident, in a great drought, fire was communicated to it, and almost every stick on the whole (about two acres,) was consumed. I sowed it in autumn, with a particular kind of choice and clean wheat. The fire had so completely destroyed the seeds in the soil, that nothing, not even the *fire-weed*, grew on it, but the wheat, which being so clean and excellent, my neighbours besought me to let them harvest it for me, that they might obtain some of the seed. By this means the harvesting happened to be delayed until it was rather too ripe, and the ground was covered with wheat in every part too thick for common seeding. I nevertheless determined to plough it in, and try by this means for a second crop. But being disappointed, in help, the seed lay on the surface undisturbed, until a rain came, and it sprouted, took root and grew until the whole became as green as a meadow. I was at that time amusing myself on the question of the volition of plants, and having occasion every day to pass along the side of this ground, to visit some patients in that direction, I had full opportunity to observe the descent of the radicles, and the ascent of the plumules from the grains, in every position, so that I could not possibly be mistaken that it was really the wheat that germinated, and I began to hope for a small crop of wheat notwithstanding the want of culture. I even noticed the hulls of the wheat-grains, in the spring, still attached to the roots. But to my great mortification, at earing time, there was scarce an ear of wheat in five hundred; it was nearly all cheat, or *chess*, as it was there called. I was at a loss to account for this very palpable demonstration; but I recollected having read in some fragments of an old book I had some years before picked up, in a window of a publick house, that wheat, rye, &c. had two sets of roots, the lower produced in the fall, and the upper put forth in the spring, and I dug up a stool of wheat and another of rye, washed out the earth, and found them as the author had stated. Now, admitting that, as is probable, the stalk is killed down to the root in winter, would not the new shoot, if any, (and these could have but one set of roots, being on the surface,) springing from the root, be less perfect? I cannot say how it is; but for the above facts I can avouch the truth, and will add another which I heard several times repeated by a gentleman, on whose veracity I can, after more than twenty years acquaintance, implicitly reply—a man of very correct observation, and who possessed a degree of intelligence and information that seldom falls to the lot of a plain, practical farmer, as he was. He showed me a piece of land which he said he had sowed in oats, but by

*Something like this takes place with the Russia turnip.

some accident most of them had, when ripe, been left unharvested. A second crop came up and grew very rank; but was never fed off, as he had abundance of good pasture elsewhere, and never approved of pasturing his meadows, of which this was a part. He re-sowed it with grass seed, but whether in winter, on the snow, as is the most common practice in that country, or whether he ploughed and sowed it in a spring crop, I have forgotten; but my impression is the former; for the second year it bore a heavy crop of cheat, and the third or fourth year, amongst the grass, there appeared about a half crop of well headed rye, pretty evenly distributed over the whole. He said it could not be from cattle, as they were never allowed to run there, and if they had, they never had opportunity to eat rye. Some years after having heard this, I related it to another farmer, who said he had seen something like it on his own farm, and neither of them could account for the production of the rye. I acknowledge that I have not absolutely proved that wheat, &c. changes to cheat, though the evidence is such as to convince me, for the present, and in my opinion, far better than any thing I have either seen or heard, to induce any one to assume the negative side of the question. But before I conclude, I will just observe to the Doctor, that though every farmer has seen cheat growing in the winter killed spots in grain fields, and knows that in most soils, if wheat be sown on its own, or on oats stubble, it will be very apt to abound in cheat, it is best to have clean seed; for cheat will produce cheat again, for at least a year or two, and possibly forever, unless some circumstance favourable to a change should intervene.

N. CROOKSHANK.

Harrison, Ohio, Sept. 8, 1826.

HORTICULTURE.

ON SEA KALE.

(From the Memoirs of the Phila. Agricultural Society.)
SIR, Princeton, N. J., Oct. 13, 1817.

My brother-in-law, Mr. Sergeant, informs me that you have expressed a wish to be furnished with some of the seed of the sea kale, for the purpose of cultivating that delightful vegetable. I do myself the honour to send a parcel herewith, and shall be very glad if the product should answer your expectations.

The sea kale, or *crambe maritima*, has been long known in those parts of Great Britain which border on the sea coast, where it grows wild, in a light, sandy soil. Its introduction into gardens is a recent event. At present, I am informed, it is one of the most favourite articles of cultivation in that country. It is one of the most tender and delicious of all the numerous species of the brassica, or cabbage tribe, not excepting even the cauliflower. It does not, like most cabbages, form a head; and it would be both coarse and tough if it were not bleached. It is a very early plant, being ready for the table ten days or a fortnight before the usual time of beginning to cut asparagus. Like asparagus, it is perennial. When you have once formed a bed of the sea kale, it will continue to produce abundantly, when managed with tolerable care, for a number of years.

I received the first seed which I planted from John Lowell, Esq., of Massachusetts. From his letter and from my own experience, I am enabled to offer the following directions for cultivating this vegetable.

It delights in a dry, sandy, hungry soil, and requires no manure. In rich and moist land it is said to be apt to rot.

The seed should be deposited in rows, about three feet apart each way. For this purpose I form-

ed a long bed, slightly raised, and a little wider than a common asparagus bed, in which I made two rows. From three to five seeds ought to be deposited in a place, to provide for failures, which are not uncommon with this kind of seed. After they have come up, all the plants or stools may be removed, excepting one, the most vigorous and promising. As the seed is a long time in coming up, sometimes as much as eight or ten weeks, I found it convenient to mark each place where it was deposited with a little stick, that the plant might be kept free from weeds, and also that the danger of pulling it up with the weeds might be avoided. It ought to be sown about the first of April, or from that to the tenth.

During the first summer and autumn, the plant, if circumstances be favourable to its growth, will send out large, coarse, thick sea green leaves, which instead of forming a head will lie flat on the ground. Some of the most vigorous stools or plants, will cover a space of two and even three feet in diameter. Toward November the leaves will die, and the whole plant will appear as if about to perish. Soon after this takes place, i. e. generally about the middle or latter end of November, the whole bed should be covered pretty thick with sea-weed, long litter, tan, or some similar substance calculated to preserve it from the frost. If none of these are at hand, the earth may be heaped around each plant, covering it to the depth of several inches. I have always been careful, in covering each root or stool, in the autumn, (denuded of its leaves, as before described), to mark its situation by a stick, that in the process of uncovering in the spring, there might be no difficulty in finding the plant, nor any danger of injuring it by an unintentional stroke of the hoe.

In the spring, as soon as the frost is out of the ground, the covering of manure should be removed, and dug round the plants, taking great care not to wound or injure them. Each plant should then be covered closely with a garden pot, or a wooden box, or a little fresh tan, or (which is said to be best of all), some sea sand should be heaped over it to the height of about one foot. Mr. Lowell uses an earthen pot, which is the neatest and most simple mode of covering and bleaching the plant. On account of the difficulty of getting proper earthen pots in this place, I cover mine with wooden boxes, very carefully made with close joints, and about twelve inches every way. Where none of these can be conveniently had, the common soil, provided it be dry, may be heaped over the plant. But if the season should be wet, the young shoots will be apt to rot.

About the middle of April, sometimes sooner, you may remove the covering and examine the state of the plant. If it is sufficiently grown, it may be cut. One plant will furnish enough to fill a moderately sized dish. In cutting, great care ought to be taken not to wound the crown of the plant. It may be cut down to within half an inch of the old crown of the last year. It should be cut but once in a season. Of course, when it is cut, the pot or box should be laid aside, and the plant suffered to grow in the open air, and run to seed, which it will do every year, with great luxuriance. The bleached shoots, as they appear on removing the pot, are of a most brilliant white, and the tops of a most beautiful violet colour. A more elegant vegetable I never saw.

The process of bleaching and cutting ought not to be too soon commenced. It ought in no case to commence earlier than the next spring after sowing the seed; nor even then, unless during the first summer the plants shall have grown so well as to cover an extent of ground at least two feet in diameter. The best plan, in general, is to leave them near two years before the process of bleaching is begun; in which case, like asparagus, they will reward your

patience, by more vigour and productiveness afterwards.

The seed does not appear till the second year. And then, even if the plant be strong enough for bleaching and cutting, after the first flowering stem is cut off, it will send up another, and flower, and ripen its seeds. This ripeness is determined by the colour of the capsules. When they turn yellow and begin to fall, the stem ought to be cut off and hung up to dry. This will probably be toward the latter end of August or the beginning of September.

This vegetable requires to be thoroughly boiled; and if boiled in milk, or milk and water, it is more tender and delicious. A little melted butter is usually poured over it when served up. In short, it ought to be cooked and served up very much in the style of asparagus, excepting that it requires rather more boiling.

This vegetable, like most others, may be forced. For the sake of having a few plants earlier, as well as that the whole crop might not come on at once, I have generally thrown a wheelbarrow full of hot stable manure over each box, to the extent of about a quarter or a third of the bed. The best covering, I believe, for those which are intended to be forced, is an earthen pot; which will keep the manure from coming in contact with the plant; and, at the same time, be a better conductor of heat than a wooden box. This liberal use of manure will occasion no loss, as it will be on the ground, ready to be used in neighbouring parts of the garden.

The plant ought always to be covered for bleaching as soon in the spring as the frost is out of the ground, and before the vegetation starts.

In the first, and every succeeding fall, the dead leaves should be carefully removed, lest they should rot the crowns of the plants, as they are very large and succulent.

I have generally sown the seed without breaking the capsules. Mr. Lowell, however, advises that some of the capsules be broken in sowing them. In England it is necessary to sow the seed in the fall, as it will not there come up the first year. In this country, it grows the first season as well as any other plant. Mr. Lowell recommends that some of the seed be sown in the fall, as he says he has observed that the seed dropped in the autumn, by the plant, usually comes up with great vigour. I take it for granted he means in the succeeding spring.

You may perhaps imagine, from the length to which I have extended my directions, that this vegetable is difficult of cultivation. This, however, is by no means the case. Scarcely any article in the garden is more easily raised. I have been minute, perhaps unnecessarily so, that you might not be at a loss with respect to any point.

I have the honour to be, sir, with much respect, your obedient servant,

SAMUEL MILLER.

RICHARD PETERS, Esq.

CULTIVATION OF THE POPPY FOR OPIUM—DESCRIBED AND RECOMMENDED.

MR. SKINNER,

Sir—I have some Asia Minor wheat, and can spare you a little. Can you get me any white poppy seed? In India I have known poppy land taxed twelve dollars per acre and more. The opium is easily gathered by children of 6 and 7 years old. When the poppy heads, a vertical or longitudinal incision is made at night; in the morning the juice which has exuded is scraped off, and in the evening another incision is made opposite the former. Thus incisions are made until no more juice exudes. The juice soon becomes hard; it is formed into cakes, when a kind of paste and a few poppy leaves are put over each cake. A more simple pro-

cess cannot be; the children have a knife or piece of iron, and scrape off the exudation into a shell or cup. They go from one poppy head to another; the poppies are in rows about a foot wide, and the walk between is about as wide; so the children can easily reach to every poppy head.

This cultivation might even become an article of export. The consumption is very great here, and must increase with our population. I have looked at the Secretary's report, but cannot find opium amongst imported articles. You can ascertain the price and estimate the quantity used.

January 25, 1827.

[Present price in this market is \$3.50 per pound; probable annual consumption, about 100 cases of 33 pounds each.]

HORTICULTURAL ITEMS,

From Loudon's Gardener's Magazine—1826.

Remarkable variety of the Apple.—In the Annals of the Linnæan Society of Paris, for May, 1824, M. Tillette de Clermont-Tonnere has described a remarkable apple tree, as growing at St. Valery, in Normandy. This apple tree, which they believe to be between thirty and forty years growth, has constantly produced flowers of one sex, and consequently barren. The flower is composed of an internal and external calyx, with neither stamens nor corolla. The female organs consist of fourteen styles, with oblique stigmas. At the time of flowering, it is customary for every young woman of St. Valery, to go and make her apple, by fixing a nosegay of the blossoms of any common apple tree, on a tuft of those on the one described: this is attached by a piece of ribband in such a manner, that in autumn every one knows the fruit that her nosegay has been the cause of producing. It is remarked that these fruits differ among themselves in flavour, colour and size; and that they bear some relation to those of the different hermaphrodite trees, the blossoms of which have been used in their fecundation. Grafts from this tree remain always barren, notwithstanding attempts to fecundate the blossoms artificially. Seeds sown have come up very well, but the plants are yet too young to produce blossoms.

Tomatas. The following recipes were obtained from an eminent French cook:

Tomata sauce for cold meat. Boil tomatas when ripe, rub them through a tammy cloth; to every quart of pulp add $\frac{1}{2}$ ounce of garlick and 1 ounce of shallots; salt to taste; boil half an hour; strain out the garlick; add to every quart half a pint of common vinegar, and a wine-glass full of Chili vinegar; let it stand a day or two before corking.

Potted Tomatas. Reduce your tomatas over the fire till they are quite thick, stirring all the time to keep them from burning; rub them through a tammy, put them again in your stewpan, with an equal quantity of glaze, and reduce again over a sharp fire till you think the whole will be quite firm when cold, (or like glaze;) put them in a white earthen pot; when cold, cover them with writing paper dipped in brandy; pour over some warm hog's lard, and cover all over with a bladder tied quite tight. A small piece added to a little gravy, or melted butter, will make an excellent sauce for cutlets or chops.

Tomatas quite plain. Reduce as before, only be more careful in evaporating the water from them; rub them through a tammy, put them when cold into fruit bottles; they must be corked very tight and tied down; put the bottles nearly up to the cork in cold water, over a gentle fire, till they boil; then set them on one side till cold; take them out and dip the cork in good cement, of bees-wax, rosin, &c. This may be used in making sauce for cold

meat, or as above, by adding strong gravy. It is intended, of course, to save the glaze.

Tomatas with gravy. This is simply stewing your tomatas in a little good gravy till quite tender, keeping them whole; drain them on a sieve, dish them up, and pour a little half-glaze, and a tea spoon full of vinegar mixed with it, quite hot, over them.

Tomatas may likewise be put into vinegar as a pickle.

Towit of tomatas. Take a pint of the tomatas; add a pound of fine sugar, reduce it in the same way as a jam; add the juice of a lemon: this makes a very good towit.

Tomatas as dried fruit. The pulp may be reduced, say a pint, with a pound of fine sugar, till quite stiff; pour it on your tin; it must be dried in a stove; when nearly dry, cut in what shape you please; it does for ornament in the dessert.

Grafting the Pine and Fir tribe. The Baron de Tschudy has made a great many experiments on grafting trees and herbaceous plants, some of which we have noticed in the second edition of the Encyclopædia of Gardening. The pine and fir tribe he inoculates before the buds have pushed, which is found to succeed much better than any other mode. In herbaceous vegetables, he has grafted the melon on the briony, the result of which was, fruit of the size of a citron, very sweet. The artichoke he grafted on the cardoon; the cauliflower on cabbage; love-apples on potatoes; and so on.—*Ann. de l'Agr. Franc.*

Potatoes. Voltaire, it seems, was the first to call the attention of the French to this valuable tuber, in 1777; and after him, Parmentier and Cadet de Vaux.

Preserving Potatoes in a dried state. Wash them, cut them in pieces; steep them forty-eight hours in lime water, then forty-eight hours in fresh water; dry them in an oven. One hundred parts of fresh potatoes will give thirty, so prepared and dried. In this state they may be kept for years, or ground at once into flour. This flour, mixed with a third part of that of rye, is said to make an excellent bread. The same author proposes to moisten potatoes dried as above with olive oil, and then to grind them and use them as coffee.

Primula Sinensis. This plant is greatly prized in France and in the Netherlands, where, under the protection of glass, without fire heat, it flowers most abundantly the whole year.—*Annal. de la Soc. Linn. de Paris, Mars, 1825.*

Ringed Fruit Trees. A pamphlet has been published on this subject by M. C. Bailley, of Paris; it is in two parts; the first treating of the effect of ringing on fruit trees in general, and the second of the effect of ringing the vine.

1st. Ringing increases the diameter of the parts of trees, but not their length; a fact explained by the theory of the ascending and descending sap. The latter is arrested in its progress by the circular incision, as is proved by the thick edge which takes place on the upper margin of the wound, and by the diameter of the shoot, which, in the vine in particular, acquires double the thickness above the wound that it does below it. But in proportion as the shoots are benefitted by ringing, the roots are injured by the want of the regular circulation of the descending sap; the great art, therefore, is to adjust the dimension of the incision to the degree of sufferance which the system of roots can undergo, without material injury. 2d. The effect of ringing vines which have ligneous stems, is similar to that produced on fruit trees in general; and, therefore, M. Bailley confines himself to the effect of ringing those vines which are annually cut down to lower shoots, as is the case in most of the vineyards of France. To vines of this description, he considers the practice disadvantageous, as weakening the root; but he excepts certain cases, in which, as in provines, the shoots are annually laid down and

covered with earth; and says, if it could be so contrived as to nourish the young shoots from the fibres produced at the incision, when it is buried in the soil, and thus dispense with the large ramose roots often unfurnished with fibres, and which only serve to consume the sap prepared by the leaves, it would be of great advantage.

Transplantation of trees. An Italian journal has published a long paper on this subject, containing the results of many experiments made by M. Caradori; these are, 1st. To cut as little off the roots as possible; 2d. That transplanted things require no other nourishment than water, and are injured by manure; and 3d. That too much care cannot be taken to shelter them from the sun.

Culture of silk in Sweden. This it seems was attempted a number of years ago, and in 1825 it was renewed. The mulberry grows very well in some of the provinces, and the silk produced is said to be of a finer and stronger quality than that of India. The silk produced in Bavaria is in like manner said to be superior to that of Italy.

The Agricultural Society of Stockholm celebrated in February last their twelfth anniversary. The King himself was present, and made a speech on the importance of the subject, observing that the result of their efforts had, notwithstanding the severity of the climate, exceeded their hopes.

RURAL ECONOMY.

METHOD OF MAKING BUTTER IN BRIT-TANY.

(From the Memoirs of the Phila. Agricultural Society.)

Nantz, 31st Dec. 1819.

SIR,—The recollection of your attention in showing me your cow establishment in Germantown, has suggested the idea of forwarding to you the process they have in Upper Brittany of making butter, which is a little different from the American mode. Should it be of any service to you, I shall feel much gratified.

FRANCIS DA COSTA.

REUBEN HAINES, Esq.

Mode of making butter, as it is practised in the neighbourhood of Rennes, in Brittany, where the best butter in France is made.

Milk is composed of three parts, essentially different from each other; they are as follows:

- 1st. The aqueous part, called whey.
- 2d. The cheese part, which is substantial.
- 3d. The butter part, called cream, of an oily nature, and which comes up naturally to the surface of the milk even before its decomposition.

It is this cream that is turned out into butter by churning.

In order to make good butter, the decomposition of milk must have begun; I mean its three parts must be exactly separated, as it happens when it begins to turn sour. Milk must necessarily be sour before beginning to churn; but it is urgent to churn it as soon as it is sour, and not to wait its fermentation.

It must have curdled and soured of itself without fire. In the winter season, however, it is proper to pour a little sour milk into it, to make it coagulate.

Though the cream is the elementary part of the butter, and neither the whey nor the cheese part contain any of it, yet it is necessary to throw into the churn the three parts of the milk, and to churn them all together. The reason of it is evident. The churning, which must be always uniform and continual, communicates a slight degree of heat, which would give a disagreeable taste to the butter, if the cream were churned alone; while churning the whole together, the acidity of the whey tempers the heating effects of the churning, the ch-

part helps the separation, and the butter comes fresh out of the churn. It is to preserve that fresh taste, that in summer our butter women, as soon as they perceive the small globules of butter beginning to form, do not fail to throw into the churn (by the hole of the churn-staff, and without stopping the churning,) some pints of spring water every ten minutes, that is, a pint to every fifty or sixty pints of milk: in winter, on the contrary, they add warm water, which they pour in as soon as they begin to churn, in order to accelerate the slight degree of heat necessary for the formation of butter; but when they perceive the first butter-globules forming round the churn staff, then they cease pouring warm water, and the temperature warns them from putting any more cool water. Thus, to make butter, it is required—

1st. That milk must have been curdled and soured, but not fermented.

2d. That milk must have been naturally soured, without any help but a small quantity of sour milk, and especially without warming it.

3d. That all the milk should be put into the churn together, and churned without extracting any parts of it.

4th. That the churning should be continual and always uniform, avoiding to strike the bottom of the churn.

5th. That churning, without interruption, communicates to the milk a slight degree of heat, which is necessary, and which in winter may be accelerated, by adding some warm water from the moment one begins to churn, and without stopping the churning motion.

6th. As soon as we perceive the little globules of butter forming, we must then think only to cool, with spring water, if in summer, for in winter it is not necessary.

7th. If, when we wish to churn, we have some sweet milk not yet sour, but which it is wished to churn, it must be put into the churn with the curdled milk twelve or fifteen hours, more or less, according to the relative quantity, before beginning to churn, in order that the part of sweet milk which was added be entirely curdled.

8th. This mode is, no doubt, much longer than when the cream alone is churned; for one must churn during about two hours in the most favourable season, and it is common in winter to take four hours churning to have your butter made.

Preparation of Butter.

When butter is made, if the weather be hot, it is well after having gathered it in the churn, to let it cool about two hours; but when it is very hot weather, as that time is not sufficient to cool it, it is well to put it in a very cool place during some hours, till it is very firm, in order to extract the buttermilk out of it.

It is by kneading and turning repeatedly with a wooden box spoon, in a beech dish made out of one piece, that the women about Rennes extract the buttermilk; leaving it now and then to rest and grow hard, and then beginning again till it does not yield any buttermilk: it is only in the last extremity, and in the hot days of summer, that they knead it in cool water in order to extract the buttermilk out of it: they put nothing in it, but some salt for preserving and relishing it.

They never touch the butter but with the wooden box spoon, which must be impregnated, and also the dish, with some light brine, to prevent the butter from adhering.

All the utensils employed for milk must be carefully washed with boiling water every time they have been made use of, then washed again with cold water, and exposed to the sun, to prevent them getting a musty smell. It is necessary to remove from the dairy all disagreeable or strong smells, and to observe the most scrupulous cleanliness in it, but

without humidity, which would give a mouldy taste to milk.

The churn is made of chestnut wood; it is scalded every time it is emptied to churn again; it is rubbed with a bunch of holly-oak, that scratches and cleans it well, and then washed again with cold water.

The pots and churn must keep no smell of the sour milk, and none of the utensils employed should be or have been put to any other uses, for fear of spoiling the whole.

Buttermilk.

In order to keep this buttermilk many days, one must extract its whey, that is sour; the means are as follow:

In the lower extremity of the churn level to the bottom, an opening must be made, that is, shut by a peg of about three or eight lines in diameter: after the butter is taken out of the churn, it is left to settle some time, to let the whey have time to separate from the curd; then one takes out the peg, and makes all the whey run out into a basin, taking care to put the peg in as soon as the curd comes out. This whey is given to the hogs. If all the whey is not out of the churn, and the curd has a sour taste, one throws some pints of cool water in the churn, takes out the peg, and the water runs out, carrying with it the remaining whey. This milk may remain in the churn many days without any inconvenience; it may be given to hogs, to horses, and even to calves, mixed with a little sweet milk.

The butter made according to the above mentioned process is of an excellent quality, and superior to the best *Wonderly's butter*, in the spring, found in the Philadelphia market. I have been told when in England, that in some counties, as well as in some counties in the south of Ireland, the mode of churning the cream and milk of one milking, altogether, was in general use.

FRANCIS DA COSTA.

[In Europe few, if any dairy farms, possess the great advantages we derive from our milk-houses built over springs of water; and substitutes are resorted to, for cooling the butter and keeping the milk, unusual with us. I have seen the milk, in large cheese dairies, churned without suffering it to rest, as we do, and throw up cream. Butter, too, is made from the fresh or new milk, of excellent quality. But it is questionable whether or not our mode be not the most economical and convenient. There is much difference of opinion, as to washing out the buttermilk by cool water, in moderate quantities; or working it out entirely by the ladle. Success attends both modes practised by intelligent dairy women. The hand should be applied sparingly, if at all; the ladle (of wood,) being far preferable. There is, too generally, a great omission of carefulness in attending to the cream collecting for churning. The vessels or cream pots should (in warm weather,) be kept in proper places, surrounded by cold water; and it is indispensable that the cream should be agitated or stirred by clean rods or a flat spatula, twice every day. This is highly advantageous, and not generally attended to. The chemical reasons for this operation would, perhaps, be unnecessarily theoretical. The oxygen of the air is essential to the preparation of the cream; or the conversion of it to butter in the churn. The more the particles are exposed to the influences of the air, gradually in the cream-pot—constantly, but not violently, in the churn—the sooner its conversion occurs, and the more valuable is the butter. Churning by water or machinery, often agitates the cream too violently; so that the oily parts are not sufficiently oxygenated. An injurious fermentation is also produced by the violent motion. Moderate movement is always the best

either with the churn-staff, or dashers. I was obliged to attend to these circumstances when I had a very large dairy. R. P.]

INTERNAL IMPROVEMENT.

OHIO CANALS.

At a late meeting of the Board of Canal Commissioners, General Thomas Worthington was appointed additional acting commissioner. We understand that he will superintend the surveys about to be made on the southern end of the Ohio Canal, and should any part of this section of the line be put under contract in the ensuing season, that he will superintend its construction.

As it is expected that part of the canals will be completed by the 1st of July next, the Board have established the rates of toll to be paid on the property to be transported on the Ohio and Miami Canals; and have appointed the following gentlemen Collectors, viz:

SAMUEL M'HENRY,	Cincinnati.
J. P. REYNOLDS,	Middletown.
D. H. BEARDSLEY,	Cleveland.
WOOLSEY WELLS,	Akron.
MAHUE FOLGER,	Massillon.

Rates of toll established by the Board of Canal Commissioners, to be paid on property transported on the Ohio and Miami Canals.

On flour, meal, whiskey, all kinds of grain, and all other agricultural productions (not otherwise provided for,) salted provisions, domestic animals, pot and pearl ashes, and on salt, for the first 100 miles, or any distance less than 100 miles, one cent and five mills per ton per mile; and for each mile in addition to 100 miles, one cent per ton per mile.

On merchandize, (including dry goods, groceries, hard and hollow ware, wrought iron and steel,) for the first 100 miles or any lesser distance, four cents per ton per mile; and for each mile in addition to 100 miles, three cents per ton per mile.

On mineral coal, for the first 100 miles or any lesser distance, five mills per ton per mile; and for each mile in addition to 100 miles, three mills per ton per mile.

On gypsum, brick and lime, for the first 50 miles or any lesser distance, one cent per ton per mile; for the second fifty miles or any part thereof, seven mills per ton per mile; and for each mile in addition to 100 miles, five mills per ton per mile.

On staves and heading, stone for building, stone for lime, for monuments or tomb stones, sand and grind stones; for the first 50 miles or any lesser distance, five mills per ton per mile, and for each mile in addition to 50 miles, three mills per ton per mile.

On iron ore, for the first 10 miles or any lesser distance, two cents per ton per mile; and for any distance in addition to 10 miles and not exceeding in the whole 50 miles, one cent per ton per mile; and for any distance in addition to 50 miles, five mills per ton per mile.

On pig metal, for the first 50 miles or any lesser distance, two cents per ton per mile; and for any distance in addition to 50 miles, one cent per ton per mile.

On boards, plank, scantling and other sawed stuff (reduced to inch-board, superficial measure,) for the first 50 miles or any lesser distance, one cent per thousand feet per mile; and for each mile in addition to 50 miles, five mills per thousand feet per mile.

On timber, squared or round, for any distance, one cent per hundred cubic feet per mile.

On shingles, for any distance, two mills per thousand per mile.

On posts and rails fencing, for any distance, three cents per thousand per mile.

On wood for fuel, for any distance, one cent per cord per mile.

On boats made and used chiefly for the transportation of property, two cents each, for each mile of their passage.

On boats made and used chiefly for the transportation of persons, twelve cents on each boat, for each mile of their passage.

On all articles not enumerated, for any distance, three cents per ton per mile.

LADIES' DEPARTMENT.

(From the Ariel.)

MENTAL IMPROVEMENT.

"The form alone let others prize,
The features of the fair!
I look for spirit in her eyes,
And meaning in her air."

The human mind has been handsomely compared to marble in the quarry, which shows none of its inherent beauties, until the skill of the artist smooths and polishes the surface, and discovers every ornamental spot, cloud and vein. The mind uneducated, has inherent qualities and powers, which often would pass unknown, were it not for the developing influence of education. The mental powers are not only brought to light by education, but they are improved and strengthened, just as any of the locomotive organs are by exercise. And as mental strength and energy are preferable to corporeal, so will be the inducements to cultivate and practice those means, calculated to produce that effect.

Science, as well as a knowledge of men and the world, contributes to divest us of many unreasonable prejudices; it liberates us from errors, which, through ignorance, blind the intellectual eyes of many, and enable us to view things and principles in their proper light. Nothing can be more unfavourable to the character of a female, than those little prejudices which result from ignorance, and which represent objects to the mind with erroneous impressions, and poison it with extravagant superstitions.

The knowledge derived from a good education, affords a constant fund for conversation, without descending to those trivial discourses, to which the uninformed necessarily are obliged to resort. Not only does it thereby elevate its possessor above the ignorant; but it gives animation to the countenance and air, without which none can be really beautiful; for what signifies elegance of form, and softness of expression, without the sacred inspiration which the mind alone can give?

"A damask cheek and ivory arm,
Shall ne'er my wishes win;
Give me an animated form,
That speaks a mind within."

Dear females, let not the season of youth be barren of improvements, so essential to your future worth and felicity. In youth, the character of every one, and especially of females, is in their own power, to give it in some degree whatever complexion they will; hence, in some measure, they have the direction of their own fate. Youth is the proper season likewise, for cultivating the humane and benevolent affections, and of subjugating and training the passions; for whatever impressions are made on the mind in youth, will generally be most permanent in subsequent life. And, whatever may be the situation in life, nothing can be more necessary to peace and happiness, than the acquirement of virtuous dispositions and habits. These in part may be acquired by reading biography: "for by observation and reflection upon others, we begin an early acquaintance with human nature, extend our views of the moral world, and are enabled to acquire such a habit of discernment, and correctness of judgment, as others obtain only by experience."

A frequent association with good company is essential to give an elegance of manners, and thereby add to mental excellence. But company without mental improvement, cannot give the value and interest to individuals, which is so desirable; it alone cannot render them good companions, good parents, and good citizens. The one is useful to us only in the higher walks of life; the other will be a treasure to us, even if our lot should place us in the earth-built cottage of the forest.

"But Oh! where both their charms unite,
How perfect is the view,
With every image of delight,
And graces ever new."

When females have it in their power thus to adorn themselves, and increase their own worth and happiness, how careful should they be to improve each opportunity to the best advantage, and how justly in after life, may they censure themselves, if they suffer the golden hours of youth to pass unimproved. No remark can be more true, than that the only way to *charm long*, is to secure mental improvement. Mere personal beauty may fascinate the inconsiderate for a day; but like the ephemeral flower, it fades, and leaves none of its former delights; while beauty of mind increases with age, and will be bright in the evening of life, when all transient beauties have passed away. SENEX.

RECIPE FOR FINISHING A YOUNG LADY

Take a daughter of a cheese-monger, a tallow-chandler, or any other tradesman, who has some money but not much information, and if she be an only child, so much the better for your purpose.—Stuff her with plum cake, and praise her till she be nine, then teach her the horn book, and let her practice for three or four years at such reading as may be selected for her by Mary, the maid of all work—the said Mary taking especial care that Miss is her confidant in all her little matters in the sweet-hearted line. When she enters her thirteenth year, send her to Miss Diddlefidget's "Establishment," to be finished. Here she must read a little, and spell some; but avoid every thing like grammar as a vulgarity and a plague. Put her up to "wooly-woo parley woo play tail," and she is *Frenched*. Strum her up six octaves and a half of the *pianar*, and down again, and make her look charming at the harp, and she is *Musicked*. Inform her that Tamerlane succeeded Charles XII. as the Emperor of China, and that Julius Cæsar defeated Cromwell on the banks of the Macquarrie river in Nova Zembla, and she is completely *Historified*. Tell her that Chimborazo is a great salt lake in Siberia, and that the Po is a burning mountain in Arabia Felix, and let her give a whirl or two to the globe, and point out the longitude of the Arctic Circle and the latitude of the Equator, and she is *Geographied*. Make her waltz for three hours in the week with a French valet out of place, and she is *Attitudinized*. The other accomplishments may be obtained for money, without any exertion on her part. So much for "heducation." [London Sunday Times.

THREE FAULTS OF NURSES.

1st. To lisp in baby style, when the same words in an endearing tone would please as well; the reverse should be: the voice clear, emphatic, each syllable articulated, for imitation. 2d. To tell of witches, ghosts, and goblins coming down chimney, if they cry; whereas, children should be taught that if they behave well, nothing can harm them. Such superstitions impressed upon young minds, are rarely got rid of. 3d. To direct a child to act like a man; whereas, it is not often becoming for a little boy to ape the man, but only to conform his demeanour to his age: every age has its own peculiar decorousness. [Galaxy.

SPORTING OLIO.

THE DOG.

From the strong instinctive attachment of the Dog to the human race, his fidelity and multifarious uses, the conjecture is by no means incongruous, that he was the first animal subdued, or invited and admitted into the social contract, by Man. To illustrate this position by an example, quite *pat* to our common sense and experienced feelings—suppose a section, large as you please, of an unfurnished, uninhabited world, upon which should drop down from the clouds, or arise from the depths of the earth, simultaneously, a man and a dog, within one hundred yards of each other, what would be the result?—why; the dog immediately after the alarm of his descent or ascent should have subsided, would cast his eyes and his regards towards the man; and in a little space of time, lowering his head, and putting forth his feet leisurely, would advance with cautious and measured steps, towards his future master by legitimacy and divine right, and, wagging his tail, lick the hand advanced to him. A few words to the purpose, are as good as a thousand; and we flatter ourselves thus to have settled the matter, almost equally as well, as if *Buffon* himself had settled it.

Our present races of Sporting Dogs are thus distinguished and denominated: *Hounds*—the Blood-hound, Stag and Buck Hound, Greyhound, Fox Hound, Terrier, Beagle, Harrier, and Lurcher.—*Gun Dogs*—the Pointer and Setter, Land and Water Spaniel, the Newfound Land Dog and Poodle.

The Shepherd's Dog, Mastiff, Vermin Cur, Fox Cur, Draught Dog, Turnspit, Bull Dog, Dalmatian, Italian Greyhound, French and German Lap Dogs, English Comforters, Dutch Pugs, Cur and Mongrel varieties.

The Dog, as well as the Horse, seems to have been unknown upon the continent of America, so long as that immense continent was unknown to Europe. The fox, past all question, naturally, if not scientifically, a member of the canine genus, we presume must have been equally unknown. Dogs procreate in their first year, and the bitch carries her young, perhaps never, except accidentally, less than sixty-two days; but generally a few days longer.—She produces about half a dozen whelps ordinarily; sometimes as many as a dozen; at others, only two or three. In these respects, the dog and cat agree somewhat nearly. The bitch in her season, is a general lover, and her taste, when small, for the largest males she can find, often proves fatal to her and her offspring, producing death instead of an increase of individual life.

Of the common, or merely favourite breeds of dogs, the greater part or all the puppies of the litters, should be gradually destroyed, since both town and country are so overrun with useless, starving, and miserable curs; and the same salutary and humane rule should be observed with respect to cats. Litters of sporting and valuable dogs should be culled, and the underling or ill-shaped whelps put out of life, in which they cannot be wanted.—The remainder, in order to confirm and assure their worth, together with the bitch, should be kept perfectly dry, warm and clean, and be well fed, and as much as possible from the kitchen and dairy.

The dog lives to twenty, or even twenty five years of age, and his chief maladies are the *Distemper*, the access of which is at a period of about his half growth; and *Madness*, for which there is no cure but death; and that remedy should, on every ground of commiseration and prudence, both for the brute and human race, be administered on the first notice.

In the Distemper the puppy should be kept dry and warm, and his food and medicine should be of the cooling and aperient kind, at the same ti

nourishing. As to *worming* the puppy as a preventive of the rabies or madness, it is merely to make the poor animal's tongue sore, in order to humour a groundless, old woman's whim. On this affair and various other particulars, which however useful, it is impossible to enlarge in this work, we refer, once for all, to the *British Field Sports*. The dog should have air, exercise and grass, and particularly, if high fed and indulged, should be purged two or three times in the year, and as often as necessary have sulphur mixed with his water. Warming and combing should not be neglected. With such care, his health, hilarity and cleanliness are assured, and much disagreeable trouble avoided.

The food of the dog, regularly fed, should be two daily portions, however small, of some kind of flesh. With this may be joined farinaceous and vegetable articles—oat-meal, fine-pollard, dog-biscuit, potatoes, carrots, parsnips—soups made from the above, or with sheep's heads and trotters. It should be remembered that dogs, feeding so much upon the firm substance of bones, which they break with their teeth, are almost always troubled with constipation of the bowels, whence occasional laxatives are necessary to them; and also that the teeth of aged dogs are so much worn, as to require meat of easier mastication than in their youth, or they cannot be kept in good health and condition. With respect to medicine, it is a long experienced fact, that nothing agrees better with the constitution of the dog and cat, than sulphur and calomel, and nothing is so easy of administration. The sulphur may be given in milk or water, and the calomel, either in the same way, or more surely, enveloped, two or three grains or more for a dose, in a piece of flesh.

[*Sportsman's Repository*.]

SPORTING BOOKS.

New York, Jan. 28, 1827.

JOHN S. SKINNER, Esq.

Dear Sir—Will you allow me the *sportsman's* corner of your valuable paper, to convey to your numerous readers, that the following sporting books may be had at Wm. A. Colman's Literary Repository, 86 Broadway, New York.

SCOTT'S SPORTSMAN'S REPOSITORY—comprising a series of forty highly finished line engravings, representing the Horse and Dog, in all their varieties, from paintings by Marshall, Reinagle, Gilpin, Stubbs and Cooper; accompanied with a comprehensive historical and systematic description of the different species of each, their appropriate uses, management, improvement, &c. interspersed with anecdotes of the most celebrated Horses and Dogs, and their owners; likewise a great variety of practical information of training, and the amusements of the field. 4to. London price, 3l. 3s.

To enable any gentleman to remit the amount for a copy, 15 dollars only will be charged. Also, a few copies of

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MISCELLANEOUS.

MR. LATHROP'S SPEECH

On a motion to indefinitely postpone a bill for the support and maintenance of the poor.

Mr. Lathrop said, he was as willing as any one, to have the wants of those who are unable to support themselves attended to; but he believed there had been a very general mistake in every country, as to the proper mode of their relief. This is evident from the different systems in operation, and the contrariety of the opinions of those who have investigated this matter.

He thought he could not better explain his views than by stating the practical result of different countries, in attempting to relieve their poor. In England, since the middle of the last century, it appears that pauperism has increased just as fast as legal provision has been made, and much faster than the population.

Years.	Expenditure.	Wheat, per bushel.
1750	£ 713,000	4s. 2d.
1760	965,000	5 10
1770	1,306,000	6 4
1780	1,774,000	5 11
1790	2,567,000	6 4
1800	3,861,000	10 2
1810	5,407,000	12 4
1820	7,329,594	8 8

The population of England in 1750, was 7,500,000; and in 1820, about 11,000,000. In Scotland the support of the poor is left principally to voluntary benevolent institutions.

Per cent. of Paupers' Expenditures in 1817.	
Scotland,	3 - - - £ 119,000
England,	25 - - - 6,918,247

Public pauper expense in New York for the

Year	Expense.
1815	- - - \$245,000
1819	- - - 368,645
1822	- - - 470,000

In New Hampshire.

Years.	Expend.	Pop.	Per cent. of paupers.
1800	\$17,000	193,858	3-10ths of 1 per cent.
1820	80,000	244,161	1 per cent.

In Massachusetts.

1820	\$350,000	523,287	No. of paupers 7,000
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In Bucks county, Pennsylvania.

Years.	No. of paupers.
1817	- - - 130
1819	- - - 183
1821	- - - 206

Lancaster county.

	Expenses.
1816	- - - 117 \$16,497
1817	- - - 129 16,982
1821	- - - 212 15,351
1824	- - - 208 16,051

The report of the Franklin county poor house is, "That the managers consider such institutions highly necessary for the blind and infirm, that have met with misfortunes, and have not wherewith to support themselves: at this time (1823) we have a number here, that, if there was no institution, they would not be a charge; they calculate on being kept a considerable time before they acquire an order of relief. Dissipation and other bad habits is the cause."

Delaware county.—"The establishment of a house of employment in this county, has increased the number, or from some other cause, there is more than when maintained in the different townships."

In 1824 the secretary of state in New York re-

ported, that "of the whole number of permanent paupers (6,896) the returns and estimates will warrant the assertion, that at least 1,585 male persons were reduced to that state by the excessive use of ardent spirits, and of consequence, their families (consisting of 989 wives and 2,167 children) were reduced to the same penury and want—thus presenting strong evidence of the often asserted fact, that intemperance has produced more than two thirds of all the permanent pauperism in the state; and there is little hazard in adding, that to the same cause may be ascribed more than one half of the occasional pauperism."

In Scotland, where knowledge is diffused among all industry thus encouraged, the few poor they have, supported by their relations, religious and charitable institutions, the expense for many years has been more than twenty times less than in England, with her hereditary paupers, supported out of the public treasury.

From this, Mr. Speaker, it clearly appears by the experience of other states and countries, that the system sought to be established by this bill, will not answer the purposes intended by its friends. Its provisions are such that it could not be carried into effect without great inconvenience to the commissioners, and great expense to your counties. All that appears to me to be necessary, is so to change your laws gradually, that voluntary charitable institutions, in which there is strict economy, may take charge of the poor and really necessitous, and with kindness administer to their relief.

LIVING IN SPAIN.

A family that I got acquainted with in a provincial town in Spain, gave me an account of their expenditure. They were decent people, and though with small means, were visited by the rich. Their house was the resort of very agreeable company. The family consisted of a man and wife, their two daughters (grown up) and a maid servant.

DAILY EXPENDITURE.

(The pound of meat in Spain is 32 ounces.)

	s.	d.
Half pound of beef,		
Half pound of bacon,		
Half pint of peas,	0	5
One onion,		
One cabbage, salad, &c.	0	4
Three pounds of fine bread,	0	4
Fuel,	0	5
	1	4

MANNER OF COOKING.

Breakfast, at eight o'clock.—The beef, bacon, peas, onion, and a little spice, boiled for an hour in three pints of water, and the broth poured on a pound of bread, cut in thin slices. They take this soup with mint finely powdered.

Dinner, at one o'clock.—The same meat and peas boiled again for two hours with a cabbage, or piece of pumpkin, about 5lb. weight, seasoned with pepper. The broth of this second boiling put on sliced bread, and boiled separately for half an hour. This soup is served up first, then the cabbage, and then the bacon.—N. B. If there are any children, this bacon is squeezed between two slices of bread for their supper.

Supper.—The same beef chopped or minced, and put to boil for an hour, with tomatoes, capsicum, or a head of garlic, with two spoonsful of oil, finishing with a plentiful dish of salad, onions or cucumbers, according to the season.

Drink.—Water on all occasions.

The house in which they lived was their own; and their income, which was very little more than the 1s 4d a day, came from the rent of three houses in the town, their only property. They had expectations from an uncle, a dignitary in the church, but he gave nothing.

HIGHEST RELATIVE STRENGTH OF MATERIALS.

<i>Metals.</i>	
	<i>Force of a square inch, in lbs. avoirdupois.</i>
Steel, razor temper,	150,000
Iron wire,	113,077
Copper ditto,	61,228
Platinum ditto,	56,473
Silver ditto,	38,257
Gold ditto,	30,883
Tin ditto,	7,129
Lead ditto,	3,146
Antimony (cast)	1,060

<i>Woods.</i>	
Lance wood,	24,696
Locust tree,	20,582
Ash (Frasinus)	18,915
Oak,	17,820
Beech,	17,709
Arbutus,	17,379
Teak,	14,220
Alder,	14,186
Mulberry,	14,054
Elm,	13,489
Pitch Pine,	13,176
Fir,	13,000
Larch,	11,093
Plum,	12,782
Willow,	12,782
Mahogany,	12,186
Chestnut (100 years in use,)	12,168
Maple,	10,584
Poplar,	6,641
Cedar,	4,973

<i>Miscellaneous Substances.</i>	
Hemp fibres, glued together,	92,000
Paper strips, glued together,	30,000
Ivory,	16,626
Slate (Welsh)	12,800
Plate glass,	9,420
Marble (White)	9,000
Horn of an ox,	7,667
Portland stone,	784
Brick,	300
Plaster of Paris,	72
Mortar of sand and lime, sixteen years made,	50

INSTINCT AND REASON.

The following fact goes far towards proving that instinct differs chiefly in degree from reason:—A few years since, a pair of sparrows, which had built in the thatch roof of a house, at Poole, were observed to continue their regular visits to the nest long after the time when the young birds take flight. This unusual circumstance continued throughout the year, and in the winter, a gentleman who had all along observed them, determined on investigating its cause. He therefore mounted a ladder, and found one of the young ones detained a prisoner, by means of a piece of string or worsted, which formed a part of the nest, having become accidentally twisted around its leg. Being thus incapacitated from procuring its own sustenance, it had been fed by the continued exertions of its parents.

[*Zoological Journal.*]

PLATE POWDER.

In most of the articles sold as plate powders, under a variety of names, there is an injurious mixture of quicksilver, which is said sometimes so far to penetrate and render silver brittle, that it will even break with a fall. Whitening, properly purified from sand, applied wet and rubbed till dry, is one of the easiest, safest, and certainly the cheapest of all plate powders; jewellers and silversmiths, for small articles, seldom use any thing else. If, how-

ever, the plate be boiled a little in water, with an ounce of calcined hartshorn in powder to about three pints of water, then drained over the vessel in which it was boiled, and afterwards dried by the fire, while some soft linen rags are boiled in the liquid till they have wholly imbibed it, these rags will when dry, not only assist to clean the plate, which must afterwards be rubbed bright with leather, but also serve admirably for cleaning brass locks, finger plates, &c.

RECIPES.

FOR YOUNG HOUSE KEEPERS.

COMPOSITION CAKES.

One pound of flour, one of sugar, half a pound of butter, seven eggs and a gill of brandy.

LOAF CAKE.

Five pounds of flour, two of sugar, three quarters of a pound of lard, the same quantity of butter; one pint of yeast, eight eggs, one quart of milk; roll the sugar in flour; add the raisins and spice after the first rising.

TEA CAKE.

Three cups of sugar, three eggs, one cup of butter, one cup of milk, a small lump of pearl ash, and make it not quite so stiff as pound cake.

PINT CAKE.

One pint of dough; one tea cup of sugar, one of butter; three eggs; one tea spoonful of pearl ash, with raisins and spices.

SOFT GINGERBREAD.

Six tea cups of flour, three of molasses, one of cream, one of butter; one table spoonful of ginger, and one tea spoonful of pearl ash.

WAFERS.

One pound of flour, quarter of a pound of butter, two eggs beat, one glass of wine, and a nutmeg.

JUMBLES.

Three pounds of flour, two of sugar, one of butter, eight eggs, with a little caraway seed; add a little milk if the eggs are not sufficient.

SOFT CAKES IN LITTLE PANS.

One and a half pounds of butter rubbed into two pounds of flour; add one wine glass of wine, one of rose water, two of yeast, nutmeg, cinnamon and currants.

DIET BREAD.

One pound of flour, one of sugar, nine eggs, leaving out some of the whites, a little mace and rose water.

WONDERS.

Two pounds of flour, three quarters of a pound of sugar, half a pound of butter, nine eggs, a little mace and rose water.

[*A recipe more valuable than any of the above.*—To preserve the powers of digestion and a sound constitution, and the means of obtaining solid comforts, abstain from all these superfluous compounds.]

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 9, 1827.

THE PROSPECTS OF MARYLAND.—In a late number we made some hasty remarks on the prospects of Maryland, supposed to be applicable to some other states. The colours of the sketch were gloomy, and we would fain hope, if we could, that they were not "true to the life;" but further reflection convinces us that the whole character of the state

is undergoing a change, as certain as the change of the seasons—and it behoves us to adapt, as readily and promptly as may be, our institutions, to make the transit as easy and as safe as possible: we mean the transit from large possessions, well disciplined and profitable slave labour, elegance of manners and luxury of living, to the condition in which estates will all be cut up. Slavery will disappear, from its having become like the Indian's gun, costing more than it comes to; a condition, in which every mother's son, as in the country of New England, must put his own hand to the axe and the plough—and every mother's daughter must give up her silks and her satins and betake herself to the churn and the wheel. At present we are in that point in the transition which produces melancholy and weakness. We are just casting the slough; we may anticipate the time when the state will be far more populous, and of course physically stronger—when it will consist of small farms well cultivated—when every man, as in New England, will make his own cheese and drink his own cider. Since the settlement of the vast and so much more productive new regions of the west, we can no longer, with slave labour, make grain, nor tobacco, nor pork, nor beef, nor horses, nor mules, against western Pennsylvania and western New York and Kentucky, and Ohio; especially when the canals shall have been constructed, and in their course the mountains shall have melted away. Let us be prepared, then, for the change. We are in the way of one of those kinds of revolutions that never go backward. Above all things, the most essential and salutary provision for a dense and hard working population is, we repeat, to place in every family's reach the means of a sound and substantial education. To every one who has tasted the blessing, the highest polish of manners, and the highest degrees of intellectual cultivation may appear indispensable to social happiness; but for the strength and safety of a nation, perhaps that political condition which gives the greatest proportion of plain well informed labouring people, is the better. But mere unenlightened brute force, however numerically strong, is always weak, because it is ever in danger of corruption from abroad, and of internal dissention and violence.

We hold up to other states the example of New York, and some idea may be formed of what has been accomplished there by enlightened legislation, by the following extract.

(From the Albany Argus, Jan. 24.)

Common Schools.—The Secretary of State yesterday presented to the House of Assembly, the annual report required of him as superintendent of common schools.

It appears by this report, that of the 723 towns and wards in the state, 721 have made reports according to law, and that only two towns are delinquent, and that one of these delinquencies was occasioned by the death of the town clerk.

That there are in the towns which have made report, 8114 school districts, and consequently the like number of common schools organized; and that returns have been received from 7544 of those districts.

That 541 new school districts have been formed during the year 1826, and that the number of districts which have made returns, exceeds that of the preceding year by 427.

That there are in the districts whose trustees have made returns, 411,152 children between the ages of 5 and 15—and that in the common schools of the same districts, 431,601 children have been taught during the year 1826; the general average of instruction having been about 8 months.

There are six towns in the state, in each of which more than 2000 scholars are taught, viz: Camillus, Manlius, Marcellus, and Pompey, in the

county of Onondaga; Paris, in the county of Oneida, and Homer, in Cortland county. There are 18 towns, in which more than 1500 children are taught, and 91 towns, in each of which more than 1000 are instructed annually.

The sum of \$185,965 26 has been paid to the several districts during the year 1826; of this sum, \$80,000 was paid from the state treasury; \$94,243 96 cents was raised by a tax upon the respective towns; and \$11,721 27 was derived from a local fund which is possessed by several counties. It is a condition of the school law, that there shall be assessed upon each town, an amount equal to that which is apportioned to the town from the state treasury. And this sum may be increased by a vote of the town. It will be seen that the towns have raised \$14,243 97 more than was requisite to entitle them to a participation in the public fund. This fact is creditable to the enlightened patriotism of the inhabitants of those towns which have been thus liberal.

The number of children instructed in the common schools, exceeds, by 16,200, the whole number between the ages of 5 and 15 years. This estimate does not include the cities of New York and Albany, where the children, between 5 and 15, are not reported. The returns show an increase of 15,566 of the children between 5 and 15; and the number of children taught in the common schools, has increased 13,863 since the last annual report.

By the returns of 1816, it appears that the number of children between 5 and 15, was 36,342 more than the number instructed during that year in the common schools; in the year 1826, the number between 5 and 15, is 16,200 less than the number taught—making a difference in favour of those instructed, of more than 50,000.

The seed of the Cesarean Kale, frequently inquired for, is not to be had at the seed stores in this city.

PLOUGHES, &c.

The subscriber is now prepared to furnish his customers with Gideon Davis' Improved Patent Ploughs, in all their variety. Also, Rhodes' valuable Patent Hill-side Ploughs, together with his Cylindrical Straw Cutter; Brown's Vertical Spinners, Cultivators, &c. From the very liberal encouragement he has been favoured with for the two last seasons, and the universal satisfaction expressed by his customers, he flatters himself with the fullest confidence of their continuing their support to his establishment, which he is daily extending—assuring the public that no exertion shall be wanting on his part to merit the public's confidence, and to render his establishment worthy of their attention.

Orders for blacksmith work in the line of Ploughs and Edge Tools, will be executed in the best manner, and on reasonable terms. Orders by mail, post paid, will meet prompt attention.

JONATHAN S. EASTMAN.

No. 36 Pratt-street, immediately opposite the United Hotel.

N. B. Wanted, a quantity of tough White Oak Butts for Plough timber. J. S. E.
February 9, 1827.

SINCLAIR & MOORE,

Offer for sale at their Agricultural Repository, a large and general assortment of Garden Seeds, most of which have been either imported from London, or carefully selected in New England last fall, from seed-raisers of first respectability, by one of the firm, who had an opportunity of seeing the roots and plants from which the seeds were raised, and since received have been proved in our hot bed provided for the purpose; giving us the fullest confidence in their germination and purity. Priced catalogues of which will be furnished gratis.

Also field seeds, such as Timothy, red and white Clover, Itay Grass, Lucerne and Sainfoin, Vetches or Tares. In store, Garden and Field Tools; Bar-share Ploughs, assorted; Wood's Patent, assorted. Also, Winan's Pa-

tent self-sharpening steel-point Plough, of all sizes.—This last, we think, needs only to be known, to insure its general use; its performance and economy in smith-work, renders it valuable; they are now made strong and not liable to break. Our Cultivators this season are made light and of very strong wood, suitable for the mule or small horses.

Wheat Fans, Corn Shellers, and Cutting or Chaffing Boxes, warranted to perform well; we have recently received many expressions of satisfaction of their work.

Fruit Trees.—We have about 4,000 choice, grafted Fruit Trees, of good size to plant out this spring, at our nursery at Poplar Hill, five miles from the city; and will be packed in mats and wet moss, if requested, and may in this order be shipped to a great distance without injury—priced catalogues of which can be furnished gratis.

We are under the necessity of informing our friends, that in future we shall confine our sales principally to cash, or acceptances in town at short dates.

P. S. Wanted to purchase, a quantity of Millet seed. 2d mo., 9, 1827.

PRICES OF STOCKS.

(Reported for the American Farmer, by MERRYMAN & GITTINGS, Stock and Exchange Brokers.)

Baltimore, Feb. 9, 1827.

BANK STOCKS.		par value.	present price.
U. States' Bank Stock, per share, f. s.	\$100	118	
Bank of Maryland, do.	300	227 w	
Bank of Baltimore, do. (div. off.)	300	342 w	
Union Bank Maryland, do. do. w	75	75 w	
Mechanics' Bank, w	9	9.50	
Franklin Bank, w	20	25.25	
Commercial and Farmers' Bank, w	20	26.25	
Farmers' and Merchants' Bank, .	50	54.25	
City Bank, w	15	2.80	
Marine Bank, w	25	27.25	
Farmers' Bank of Maryland, . .	50	53 w	

CITY STOCKS.			
Corporation 6 per cent. redeemable after 1836,	100	110 w	
Do. 5 per cent. redeemable in 1832,	100	101 w	
Penitentiary 5 pr. cent. stock; (none in market.)	100		
Museum, 8 per cent. (no demand.)			
Masonic Hall, 6 per cent.	100	par & int.	
Annuities, or Ground Rents, . .	6 to 10 per cent.		

ROAD STOCKS.			
Reister's Town, . . (div. off.) f. s.	20	10.25	
York, do. f. s.	20	7.25	
Frederick, do. f. s.	20	11.75	
Washington and Baltimore, . .	50	31.50	
Baltimore Water Company Stock, per share, (div. off.)	50	93	
Union Manuf. Co. Stock, per share,	50	14 w	
Gas Stock,	100	130	
Temascaltepec Mining Co's, per share,	600	800	
Havre de Grace Turnpike 6 per cts.	par & interest		

U. STATES' STOCK.			
Six per cent. 1813, (div. off.)	100	101 1/2	
—, 1814, do. f. s.	100	102 1/2	
—, 1815, do. f. s.	100	104	
Three per cent. do. w	100	80 1/2	
Four and half per cent. do.	100	102 1/2	
Five per cent. do.	100	107	

W., wanted—f. s., for sale, by Merryman & Gittings.

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Coal Ashes, as a manure—Transmutation of Plants—On the Culture of Sea Kale—Cultivation of the Poppy for Opium, described and recommended—Horticultural Items, from Loudon's Gardener's Magazine for 1826—Method of making Butter in Brittany, France—Tolls established for the Ohio Canals—Mental Improvement—Recipe for finishing a Young Lady—Three Faults of Nurses—History of the Dog—On Poor Laws—Living in Spain—Highest relative strength of Materials—Instinct and Reason—Plate Powder—Recipes for young Housekeepers—Editorial, the Prospects of Maryland, and Public Schools recommended.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9 00	9 50		
BACON, and Hams,	lb.	6	10	9	12
BEEF-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16 1/2	20	22
Havana,	—	14	16		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland,	—	10	11 1/2		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent each number to No. 18.	—				
CANDLES, Mould,	—	13	15	16	18
Dipt,	—	11	13		16
CHEESE,	—	8 1/2	12	12	15
FEATHERS, Live,	—	20	30	37	
FISH, Herrings, Sus.	bbl.	2 3/4			
Shad, trimmed,	—	5 50	6 00		
FLAXSEED,	bush	1 00	1 10		
FLOUR, Superfine, city,	bbl.	5 25	5 50		
Fine,	—	5 25	5 50		
Susquehanna, superfi.	—				
GUNPOWDER, Balti.	25 lb.	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	58	60		
white	—	58	60		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler, & Red, new	—	1 00	1 05		
do. Red, Susque.	—	1 05	1 10		
Rye,	—	75	80		
Barley, Eastern	—	1 12 1/2	1 22		
Do. country	—	90	1 00		
Clover Seed, Red	bush	5 75	6 00		
Ruta Baga Seed,	lb.	87		1 00	
Orchard Grass Seed,	bush	3 50			
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed,	—	4 00		5 00	
Oats,	—	45		50	
Beans, White,	—	1 25	1 37 1/2	2 00	
HEMP, Russia, clean,	ton	250	260		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb.	18		25	
HOGS' LARD,	—	9	10	12	
LEAD, Pig	lb.	6 1/2	6 1/2		
Bar	—	7 1/2	8		
LEATHER, Seal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.		50		75
Havana, 1st qual.	—	30	32	37 1/2	
NAILS, 6a20d.	lb.	1 50	1 62 1/2		
NAVAL STORES, Tar,	—	1 75			
Pitch,	—	1 75			
Turpentine, Soft,	—	1 75			
OIL, Whale, common,	gal.	33	34	40	
Spermaceti, winter	—	75		88	
PORK, Baltimore Mess,	bbl.	11 50	12 00		
do. Prime,	—	9 00	9 50		
PLASTER, cargo price,	ton.	3 25			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3 1/2	3 1/2	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5 1/2	8	10	12
WHISKEY, 1st proof,	gal.	34	36		50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	31	32	50	
SUGARS, Havana White, c. lb.	13 00	13 50	14	15	
do. Brown,	—	10 00	10 50		
Louisiana,	—	8 00	9 10	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves,	—	70		1 00	
Ginger, Ground,	—	7	12	12	18
Pepper,	—	15		25	
SALT, St. Ubes,	bush	50		75	
Liverpool ground	—	50		75	
SHOT, Balt. all sizes,	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Port, first quality,	gal.	1 55	1 55	2 50	
WOOL, Merino, full b'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country,	—	18	22		
Skinnners' or Pulled,	—	20	25		

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AGRICULTURE.

NEW OBJECTS FOR THE ATTENTION OF MARYLAND AND SOUTHERN FARMERS.

[Every one must agree that some of the articles which have been hitherto relied upon as the great staples of the middle and southern states, have been rendered unprofitable either by extended rivalry and increased production at home, or by want of demand from abroad. With regard to tobacco, the self-labouring planters on the new and rich slaty lands, and with the economical habits of Ohio, are supplanting the slave-holding, less economical, and less laborious planters of Maryland and Virginia—and the cotton planter of the south has to contend against the extended culture of that commodity, eastward, in his own country; whilst abroad, especially in England, if the quantity consumed be not diminished, yet the customer there, being curtailed in his market here, and elsewhere for his manufactures, can no longer afford to give the price he was wont to do for the raw material. The present prices threaten with general ruin. In this state of things there has arisen an imperious necessity to cast about in search of new objects, on which to employ our labour and capital; nor can we longer neglect every practicable economical improvement in our domestic habits. Yet, indisputable as is this necessity, who turns from the beaten track to bestow his labour on something more profitable? Are not the same articles, and those alone, cultivated now that were a half century ago? Yet it is notorious that many commodities of great value and extensive consumption, are imported from other states, which there is no reason to suppose might not be produced in our own. Why, for instance, should we get all our hops from New England, and all our barley from Virginia? The complaint of hard times is deep and loud. Brokers, manufacturers, and monied capitalists are the only persons whose affairs prosper and whose coffers accumulate. The planter, the farmer, the merchant, at the end of each revolving year, beholds his labours, like the toils of Sisypheus, ending where they began; fortunate, indeed, if he has not lost ground; yet what planter or farmer has even inquired and reflected, much less experimented, to see whether he might not essay with advantage some new object of cultivation? Why, for instance, should the breweries of Maryland be for ever supplied with their hops from Massachusetts? Is it because the landholder of this state has proved that he cannot compete with the hop planter of that, where land is dearer? And might not the same question be asked in regard to many other things? At all events we would circulate the best information we can collect on this subject, and earnestly invite communications from those who have more leisure to pursue the inquiry—how far the growers of grain and the planters of tobacco may apply their attention and labour to objects not hitherto considered and tried.]

With respect to hops, those who have taken the previous volumes of this journal, know that we have sedulously sought the best information, from the best sources. From articles on that topic, not hitherto published, we now select the following from Dickson, with some introductory observations by Judge Buel, the able editor of the third and last volume of the Memoirs of the New York Board of Agriculture.

At a single brewery in this city, there are used about 16,000 pounds, chiefly from Boston. The present price is 20 cents; two months past the price was 24 cents per pound. Supposing the yield per acre to be, as stated to be in England—1200 pounds at 20 cents, there would be a product of \$240 per acre. But suppose half, or even one-third of this to be realized? However, we leave every one to make his own calculation. Our notice of the sub-

ject will not have been without its use, if it only lead each farmer and planter to cultivate a dozen or two of vines to give hops enough for his own use—in making cheap and wholesome beer, to be drunk, without stint, by all the family, in lieu of whiskey, which is selfishly provided for his own exclusive use and that of his male friends. If, when the hops are provided, he should ask how the beer is to be made of good quality, and at the most trifling cost, we shall be ready to give him the information. A few dozen hills in a garden would be more than sufficient for this purpose, and there cannot be a more cleanly agreeable employment of time, than that which is devoted to the culture of this beautiful and fragrant vine.]

ON THE CULTIVATION OF HOPS.

From the Memoirs of the Board of Agriculture of the State of New York.)

[The rapid increase of breweries in our state, and the consequent substitution of malt liquors for ardent spirits, is generally considered auspicious to the health and morals of our population. The cultivation of barley and hops, therefore, has become a matter of public interest. Our farmers possess the requisite knowledge, and need no other encouragement than good prices, to furnish the first article to any extent that may be required. As to the latter, our knowledge of the method and profits of their culture, is circumscribed to a few districts, in which they are becoming a considerable, and we believe a profitable staple. Having failed in our endeavours to obtain an account of the method of cultivating the hop in this state, our duty to the public impels us to give the English method; which, though not adapted in all particulars to our practice, may, nevertheless, afford valuable suggestions to those who have embarked in the hop raising business, and may serve as a guide to the novice who has no instructor at hand. The following extracts are from Dickson's Farmer's Companion, one of the most approved British publications upon agriculture.—Ed.]

The hop is a plant of the fibrous-rooted perennial kind, which climbs to a considerable height, under the support of poles. There is only one species of this plant in cultivation, but which has several varieties, as the *red bind*, the *green bind*, the *white bind*, &c. It is chiefly grown for the sake of the bud and flower, which are employed in the brewing of beer and other malt liquors for the purpose of imparting an agreeable bitter to them.

The first of the above varieties affords a very small hop; but, from its hardy nature, is capable of being cultivated in exposed situations, and where the climate is cold and not adapted to the other sorts. It is said to possess the property of resisting the blast more effectually than any of the other varieties, often appearing healthy and vigorous, in seasons when the other kinds are greatly infested with flies and lice; and at the period of picking to be less exposed to injury from the effects of the sun or rain than those of the other sorts.

The second, or *green bind*, though less hardy than the preceding kind, is considerably more productive, and on the middling descriptions of land, in situations that are not too much exposed, often succeeds very well.

But the third, or *white bind*, which is still more delicate and tender, is the most in estimation, on account of its being more early, and the produce selling at a much higher price.

The most proper situations for plantations of this kind are those that have an easy, natural, sloping position towards the south, or which are more level, and possess the advantages of a south westerly exposure, and which are well protected and sheltered from the effects of the north and north-easterly winds, by high grounds, tall fences, or trees of the

forest kinds, rising at some distance from them. But, as the plants grow closely together, and rise to a considerable height in the stems, they should not by any means be confined, or too much closed up in the plantations themselves, but have the benefit of a full and perfectly free admission and circulation of air, as well as light and the influence of the sun; as these have not only the effect of promoting the vigour and healthy growth of the binds, but, by quickly dissipating and drying up the superabundant moisture that may rest upon them, prevent the crops from being so much injured by the blast or mildew. This is fully shown by the circumstance of the middle or more close parts of such crops, especially where they are extensive, being greatly injured in this way, while the outside parts, that have the advantage of being more fully exposed to the air, sustain no injury at all in these respects.

It has been remarked by a late writer, that such situations as are in the immediate vicinity of the sea, or near marshy and fenny levels, seldom answer for the culture of the hop plant, as they almost invariably miscarry in bad seasons.

The soils most adapted to the culture of the hop plant are those of the more deep, strong kinds, whether of the loamy, clayey, or sandy qualities. They should be such as incline to dryness without being too deficient of moisture, and that have a considerable depth of good, rich vegetable mould. The thin, gravelly and chalk soils are wholly improper for the growth of plants of this nature; the former not being sufficiently retentive of moisture for the vigorous growth of the plants; and the latter, from its absorbent quality, imparts its humidity to the roots of the binds in too scanty a proportion for the healthy support of their luxuriant vegetation.

There is, however, a sort of thin slaty soil, intermixed with good rich mould, which has an under stratum of stone, that is found, by experience, to be admirably suited to the growth of the hop plant, and on which it often rises to its fullest height and luxuriance, producing an equally abundant produce with those of the most deep, strong and fertile kinds. Hops are extensively cultivated on a soil of this description in the vicinity of Maidstone, in Kent.

Hops may be cultivated on such lands as have been in a state of tillage; but in these cases it is absolutely necessary that a sufficient proportion of manure be applied, to bring them into a proper state of fertility for the perfect support of the plants. Such land as has been long in a state of pasture, and which has, in consequence, accumulated a large proportion of vegetable matter, as that of old orchards, rich dry meadows, or other grass land, is however, the most proper for the purpose.

In either case the ground should be reduced to a perfectly fine state of mould, by repeated ploughing and harrowing, or digging it over with the spade. This last is the most effectual method, where the land is to be broken up from the state of sward, and should be performed in the autumn, in order that it may have the advantage of the effects of the frosts during the winter season. By these means the plantations are not only to be brought into a perfect state of pulverization, but also rendered clean, and free from all sorts of weeds. In the last operations, the ground should always be left in as even and level a situation as possible, if it be sufficiently dry; but where it is inclined to the retention of moisture, it may be ridged, in order more effectually to remove the superabundant wetness. And immediately before the season of planting, a quantity of compost, formed from well rotted dung and good fresh vegetable earth, by being intimately blended together, and remaining in that state for a considerable length of time, should be applied in small heaps, so as to afford about half a bushel for each hole.

The business of planting out the sets is then to be commenced, which is performed at different

times, according to the nature of the plants. Where sets from the cuttings of old binds are made use of, the work is best performed in the latter end of February, in March, or the beginning of April, as the season may suit; as these are the periods of cutting over and dressing the old binds, when sets of this sort can the most easily be obtained; but, when bedded, or root sets are employed, as may sometimes be the case in digging up former plantations, the autumn is the most proper season, as about the end of October, or beginning of November.

In the first of these methods, the sets or cuttings should be made from the most healthy and vigorous binds, each being cut to the length of about five or six inches, having two or three eyes or joints, which are the buds, from which the roots and stems, or new binds, proceed. They are sold by the hundred of six score, at from six pence to a shilling. In the planting, different forms and distances are preferred by different planters, according to the manner in which the after-culture of the crop is to be performed. Where it is executed by means of horse labour, the best method is that of setting them out in rows, at suitable distances, so as to form straight lines in every direction. But, in cases where it is to be executed by the hand, this is not of so much consequence, provided a sufficient space be allowed for the healthy growth of the plants. In this way some practise the row method, while others prefer a triangular plant. It is evident, however, that the planting in equi distant rows, so as to admit of the ground between the plants being kept clean by the harrow and nidget, must be much less expensive than that of the irregular mode, in which hand labour must be employed.

The distances at which the plants are set out, or rather those of the holes and hills formed for their reception, are different, according to circumstances. Some cultivators advise six feet and a half or seven feet, while others prefer a five or six feet plant. As the hop plant, from the luxuriance of its growth, rises to a great height, and sends forth much bind and foliage, it must, of necessity, require considerable space, as where the plants stand too closely together they are not only more liable to become diseased, but to *house* or run together above the poles, by which so much shade is produced, as to prevent the hops below from completing their growth; and of course the quantity of produce is much lessened.

On these grounds it would appear that this plant cannot be cultivated with perfect success in less space than from six to seven feet; on good rich soils the latter distance may be the most advisable, as the plants will be more at liberty to effect their full growth. In this way there will be a distance of from eight to nine feet from the centre of the hills.

The holes are set out in different ways, according to the particular custom or practice of the cultivators; some making use of a line, in which knots are formed at the distances intended, which is extended the whole length of the plantation, small sticks being thus thrust down at the knots, and the land measured off from these by sticks of a proper length; others mark the holes off at once by means of stakes drove down into the ground at suitable distances each way; but a more expeditious method than either of the above, is that of striking furrows by the plough in different directions of the plantations, at proper distances, so as to form a sort of squares, the holes being made in the angles where the furrows cross each other.

In making the pits or holes, the earth is taken out by a spade or *spud*, to the depth of about twelve inches in a circular form, having the diameter of about eighteen inches, the bottom mould being a little stirred. These are then partially filled with the earthy compost, mentioned above; and the mould that was taken away replaced upon it, so as to make a little rising or hillock. On these hillocks seven sets or roots are mostly planted by means of

a dibble; one in the middle or top of the hill, and the others around it, at equal distances, about four or five inches from the sides of the holes. The sets are generally put in to the depth of about two inches in the compost, and so as to have the tops wholly covered by the mould on the surface of the hills. Some planters, however, prefer covering them lightly with the fine earth taken from the holes, after they have been planted out in the compost, to the depth of an inch and a half or two inches.

Nothing further is now necessary till about the middle of May, except keeping the ground about the plants free from weeds: when, from the increasing growth of the young plants, it will be proper to apply an addition of fine mould about them on the hills, which may be scraped up from the intervals. And in order to check the growth of the young shoots, and thereby increase the vigour of the roots, some twist them together into a sort of knot. Others, however, advise that two small sticks, about a couple of yards in length, be set in each hill, in order to direct the climbing of the shoots, three or more being led up each stick, and tied occasionally during the summer with bass or sedge.

There is still another mode of planting practised in some districts where the land is of the boggy kind and much inclined to moisture. This is that of forming the plantations into a sort of beds about sixteen feet in width, by digging out trenches three feet in width, and from two to two and a half in depth, spreading the earth thus removed evenly over the beds previously prepared. On these the sets are put in, after the holes are made a spit in depth, twelve inches in diameter, and six feet apart in each direction, so as to admit three rows on each bed, in the same manner as in the other methods. The plants in this mode are poled in the course of about three weeks with old short poles, to each of which two or more of the binds are tied; the land being afterwards kept in order by hoeing and raking. The operation of hilling is performed in the latter end of June or beginning of July. This appears, however, a tedious and expensive plan, without its possessing any superiority except that of rendering the land somewhat more dry.

It is seldom advisable to take any produce the first year, as where this is attempted much injury is frequently done to the future produce of the plantations. In the Suffolk method of planting, a produce of three, four, and even five hundred weight of hops, is sometimes, however, afforded the first year. And where bedded or root sets are made use of, a small crop may be afforded the first season, as the plants or binds will be nearly as forward at that time, as those from cuttings are in the second season.

But though this sort of plantation may be continued in the above manner, it is suggested as a more advisable practice, in many instances, to renew them at much shorter distances of time, or even to keep renewing particular parts occasionally as may be necessary. And in order to render them the most productive, whether they are managed by the plough, the spade or the hoe, the ground in the intervals should be well stirred two or three times when the seasons are favourable, and in other cases more frequently.

In the following winter after the plantation has been formed, it will be necessary to provide and prepare the poles. Where the hop-binds are healthy and vigorous in their growth, two poles may be sufficient for each hill, or in the proportion of two thousand six hundred to the acre. But where the plants are weak and less luxuriant in their vegetation, a greater number of poles will be required, as three to each hill, or at least to each other hill, which in the latter case will be in the proportion of about three thousand two hundred and fifty to the acre. But as the poles need not be so long, or of so much strength, there will probably be but

little difference in the expense. In bringing the poles they should not be carted upon the ground, but be placed at the outsides, to be afterwards removed by the labourers to the places where they are wanted.

In the second year of the plantation, it is seldom necessary to apply any manure to the hills, but the land in the interval should be stirred in the autumn, in the same manner as in the first; but in the early part of the spring, when the weather is suitable, as about the middle of March, the hills must be opened, and the earth be well cleared away from the principal roots, by means of a tool which has the title of a *picker*, in order to afford the means of pruning and dressing the stocks; in which operations all the preceding year's bearing stems are cut off within a joint or two of the roots, and all such shoots or suckers as were not permitted to attach themselves to the poles, or which have risen on the edges of the hills, fully cleared away, nothing being suffered to remain that can possibly injure or prevent the vigorous growth of the new binds. In performing this business, care should be taken to bare the different stalks and roots so completely, and to such a depth, that every thing that is hurtful may be discovered and wholly removed. And in the cutting, experienced labourers should, if possible, be employed; for much depends on the work being properly executed, as great injury may be done by leaving too great a length of bind, as well as by cutting the stocks too closely. In the former case the crops may be exposed to the *canker*, and in the latter, the hills be so much weakened as not to afford shoots in sufficient abundance. It is, therefore, necessary that the work should be carefully overlooked. After the business of pruning and dressing has been thus accomplished, the earth should be raked back again upon the plants, so as to rise into hills as before.

At this period, all such plants as have been destroyed, or that have a weak and unhealthy appearance, should likewise have others put in their stead, in order that the plantations may be kept as perfect as possible. Such of the prunings as are cut from the most healthy and vigorous plants, may be reserved for the purpose of forming new plantations.

In this season, as well as the preceding, three hoeings and one good moulding should be performed; the first about the beginning of May, the second in June, and the third in July; a little mould at each time being drawn to the roots of the plants on the hills in order to keep them sufficiently moist. The moulding should take place in the early part of August, the earth being well laid upon the hills round the root-stems of the plants; and it should be executed, if possible, soon after some rain has fallen.

(To be continued.)

(Selected for the American Farmer.)

CHARACTERISTICS OF FLEMISH HUSBANDRY.

To make a farm resemble a garden as nearly as possible, was their principal idea of husbandry.—Such an excellent principle, at first setting out, led them, of course, to undertake the culture of small estates only, which they kept free from weeds, continually turning the ground, and manuring it plentifully and judiciously. Having thus brought the soil to a just degree of cleanliness, health and sweetness, they ventured chiefly upon the culture of the more delicate grasses, as the surest means of acquiring wealth in husbandry, upon a small scale, without the expense of keeping many draught horses or servants. After a few years experience, they soon found that ten acres of the best vegetables for feeding cattle, properly cultivated, would maintain a larger stock of grazing animals, than forty acres of common farm grass: and the vegetables they chiefly cultivated for this purpose were,

lucerne, saintfoin, trefoils of most denominations, sweet fenu-greek, (*Trigonella*), buck and cow wheat, (*Melanpyrum pratense*), field turnips and spurry, (*Spergula*), by them called marian-grass.

The political secret of Flemish husbandry was, the letting farms on improvement. Add to this, they discovered eight or ten new sorts of manures. They were the first among the moderns who ploughed in living crops, for the sake of fertilizing the earth, and confined their sheep at night in large sheds built on purpose, whose floor was covered with sand, or earth, &c. which the shepherd carted away every morning to the compost dung hill. Such was the chief mystery of the Flemish husbandry.

Urine cisterns are formed in the fields, to receive purchased liquid manure; but for that made in the farm yard, generally in the yard, or under the stables. In the latter case, the urine is conducted from each stall to a common grating, through which it descends into the vault; from thence it is taken up by a pump. In the best regulated farmeries, there is a partition in the cistern, with a valve to admit the contents of the first space into the second, to be preserved there free, from the more recent acquisition, age adding considerably to its efficacy. This species of manure is relied on beyond any other, upon all the light soils throughout Flanders, and even upon the strong lands, (originally so rich as to preclude the necessity of manure,) is now coming into great esteem, being considered applicable to most crops and to all the varieties of soil.

Fallows, according to Sir John Sinclair, are in a great measure abolished, even on strong land; by means of which, produce is increased, and the expense of cultivation on the crops raised in the course of a rotation, necessarily diminished: and by the great profit they derive from their flax and rape, or colsat, they can afford to sell all their crops of grain at a lower rate. Notwithstanding this assertion of Sir John, it will be found that a fallow enters into the rotation on all the clayey soils of Flanders.

Flax is cultivated with the utmost care. The field intended for this crop, after two or three ploughings and harrowings, is again ploughed, commencing in the centre and ploughed round and round to the circumference, so as to leave it without any furrow. The heavy roller is drawn across the ploughing by three horses; the liquid manure is then spread equally over the entire surface, and when well harrowed in, by eight or nine strokes of the harrow, the seed is sown, which is also harrowed in by a light harrow with wooden pins, of less than three inches; and the surface, to conclude the operation, is again carefully rolled.

Nothing can exceed the smoothness and cultivated appearance of fields thus accurately prepared.

The manure universally used for the flax crop, demands particular notice. It is termed liquid manure, and consists of the urine of cattle in which rape cake has been dissolved, and in which the *vi danges* conveyed from the privies of the adjoining towns and villages, have also been blended. This manure is gradually collected in subterranean vaults of brick work, at the verge of the farm next to the main road. Those receptacles are generally forty feet long by fourteen wide, and seven or eight feet deep; and in some cases are contrived with the crown of the arch so much below the surface of the ground, as to admit the plough to work over it. An aperture is left in the side, through which the manure is received from the cart by means of a shoot or trough, and at one end an opening is left to bring it up again, by means of a temporary pump which delivers it either into carts or tonneaus.

The liquid is carried to the field in sheets or barrels, according to the distance. Where the cart plies, the manure is carried in a great sheet called a *voile*, closed at the corners by running strings, and secured to the four uprights of the carts; two men,

standing one on each side of the cart, scatter it with hollow shovels upon the rolled ground: or where the tonneaus are made use of, each is carried by two men with poles, and set down at equal intervals across the field, in the line of the rolling.

There are two sets of vessels, which enable the men who deposit the loaded ones, to bring back the others empty. One man to each vessel, with a scoop, or rather a kind of bowl with a long handle, spreads the manure so as to cover a certain space; and thus by preserving the intervals correctly, they can precisely gauge the quantity for a given extent of surface. For the flax crop they are profuse, and of this liquid mixture, in this part of the country, they usually allow at the rate of 2480 gallons, beer measure, to the English acre.

With culinary vegetables the Flemish markets are abundantly supplied. Most of these are grown by the small farmers, and are of excellent quality. To every cottage in Flanders a garden of some description is attached; and according to the means, the leisure, and the skill of the possessor, is rendered more or less productive. The general principles of management with all are, frequent digging, careful weeding, ample manuring, and immediate succession. The rotation depends on circumstances. The chief vegetables in common use are parsnip, carrot, turnip, scorzonera, savoy, jetterhou, cabbage, (Brussels sprouts,) onions, leeks, pease, beans, and all kinds of salading, with another vegetable called *fève haricot*, a large species of French bean, which has a place in the field or garden of almost every farmer; and being sliced down, pod and seed, is made a chief ingredient in all farm-house cookery.

The treatment of *asparagus* here, and generally in Flanders, differs considerably from our method: in forming their beds, they are not by any means particular as to very deep trenching, or a profusion of manure; nor, as they grow up, do they cover the beds with litter for the winter, nor fork and dress them in the spring; in the furrows they form a rich and mellow compost of earth and dung, with which, before winter sets in, they dress up their beds to the height of nearly eighteen inches from the level of their crowns, and without any further operation, (except supplying the furrows again for the ensuing year,) as soon as the buds appear, they cut them nine inches under the surface; by which means, having just reached the light, the whole of the stock is blanched and tender.

Every substance that constitutes, or is convertible to manure, is sought after with avidity, which accounts for the extreme cleanliness of the Flemish towns and pavements, hourly resorted to with brooms and barrows, as a source of profit. Even the chips, which accumulate in the formation of wooden shoes worn by the peasantry, are made to constitute a part of the compost dung heap; and trees are frequently cultivated in barren lands, merely to remain till their deciduous leaves shall, in the course of time, have formed an artificial surface for the purpose of cultivation. The manures in general use are—

The farm-yard dung, which is a mixture of every matter that the farm-yard produces, formed into a compost, which consists of dung and litter from the stables, chaff, sweepings, straw, sludge, and rubbish, all collected in a hollow part of the yard, so prepared as to prevent the juices from being wasted; and the value of this, by the cart load of 1500 lbs. of Ghent, is estimated at five francs.

The dung of sheep, pigeons or poultry, by the cart load, five francs and a half.

Sweepings of streets and roads, same quantity, three francs.

Ashes of peat and wood mixed, same quantity, eight francs.

Privy manure and urine, same quantity, seven francs.

Lime, same quantity, twenty-four francs.

Rape cake, per hundred cakes, fifteen francs

Gypsum, sea mud and the sediment of canals, have been all tried experimentally, and with fair results; but the two former have been merely tried; the latter is used successfully in the vicinity of Bruges.

Bone manure was altogether unknown in Flanders; but at the suggestion of Radcliff, is now under experiment in that country.—*Encyc. Ag.*

(Selected for the American Farmer.)

AGRICULTURAL SCHOOL OF MOEGELIN, IN PRUSSIA.

The agricultural institution of Moegelin is situated in the country, or march of Brandenburg, about forty-five miles from Berlin. The chief professor, Von Thaer, was formerly a medical practitioner at Celle, near Luneburg, in the kingdom of Hanover, and had distinguished himself by the translation of various agricultural works from the French and English, and by editing a *Magazine of Rural Economy*. About 1804, the king of Prussia invited him to settle in his dominions, and gave him the estate of Moegelin to improve and manage as a pattern farm. This estate consists of 1200 acres. Thaer began by erecting extensive buildings for himself, three professors, a variety of tradesmen, the requisite agricultural buildings, and a distillery. The three professors are, one for mathematics, chemistry, and geology; one for veterinary knowledge; and a third for botany, and the use of the different vegetable productions in the materia medica as well as for entomology. Besides these an experienced agriculturist is engaged, whose office it is to point out to the pupils the mode of applying the sciences to the practical business of husbandry. The course commences in September. During the winter months the time is occupied in mathematics, and the first six books of Euclid are studied; and in the summer, the geometrical knowledge is practically applied to the measurement of land, timber, buildings, and other objects. The first principles of chemistry are unfolded. By a good, but economical apparatus, various experiments are made, both on a large and small scale. For the larger experiments, the brew house and still house, with their respective fixtures, are found highly useful.

Much attention is paid to the analysis of various soils; and the different kinds, with the relative quantity of their component parts, are arranged with great order and regularity. The classification is made with neatness, by having the specimens of soil arranged in order, and distinguished by different colours. Thus, for instance, if the basis of the soil be sandy, the glass has a cover of yellow paper; if the next predominating earth be calcareous, the glass has a white ticket on its side; if it be red clay, it has a red ticket; if blue clay, it has a brown one. Over these tickets others of a smaller size indicate by their colour the third greatest quantity of the particular substance contained in the soil. This matter may appear to many more ingenious than useful, and savouring too much of the German habit of generalizing. The classification of Von Thaer is, however, as much adopted and as commonly used on the large estates in Germany, where exact statistical accounts are kept, as the classification of Linnæus in natural history is throughout the civilized world.

There is a large botanical garden, arranged on the system of the Swedish naturalist, kept in excellent order, with all the plants labelled, and the Latin as well as the German names.

An herbarium, with a good collection of dried plants, which is constantly increasing, is open to the examination of the pupils; as well as skeletons of the different animals, and casts of their several parts, which must be of great use in veterinary pursuits. Models of agricultural implements, especially of ploughs, are preserved in a museum, which is stor-

ed as well with such as are common in Germany, as with those used in England or other countries.

The various implements used on the farm are all made by smiths, wheelers and carpenters residing round the institution; the work shops are open to the pupils, and they are encouraged by attentive inspections to become masters of the more minute branches of the economy of an estate.—*Encyc. of Agric.*

SHEEP—INQUIRY.

White Post, Frederick, Va. Feb. 6, 1827.

MR. SKINNER,

Will you be so good as to manifest the value of your journal, by soliciting an answer to the following inquiries, from some of your northern correspondents. They would much oblige a brother in the art, by making as speedy a reply as will suit their convenience; and might also render a general benefit. Many of our farmers are disposed, so to change their cultivation, as to admit the keeping of a greater number of sheep, and some to make a business of it; but they are ignorant of the principles, practices, and advantages, in the anticipated change; and would feel themselves truly obliged by any practical observations of their eastern brethren.

Out of a number of queries lately addressed to the subscriber, he now proposes the substance of them. The most important of which in the view of the applicant, was to ascertain how many sheep could be kept on a given number of acres of good grass land, devoted exclusively to their support? Have any farmers made the experiment fairly, and satisfactorily, on even 50, or to the extent of 500 acres. If so, what has been the nature of the soil—what kind of grass, or grasses, have formed the sod; what portion of the land has been reserved for hay or other cultivation for a winter's supply of food—what divisions; and the process of grazing in summer, and feeding in winter—what kind of sheep; quality and quantity of wool obtained—general weight of mutton, and fitness for the butcher; price of both; season of having lambs, &c. &c.? If answers were made to the above queries in reference to at least three divisions of climate, from Virginia to Maine, such reciprocated information might be of considerable importance to sheep breeders, and be very gratifying to Yours, respectfully,

A PLAIN FARMER.

N. B. The great object is to ascertain what the real profits are; not the calculated, reckoned, or guessed advantage of land appropriated to sheep.

[The Editor hopes, and has little doubt, that "A Plain Farmer" will be obligingly answered.]

QUERIES.

Whalley's Ford, Geo. Jan. 19, 1827.

MR. SKINNER,

A tyro in the business of farming is desirous of eliciting information on the following subjects, and concludes that the surest means of obtaining it will be to make your valuable paper the vehicle of his queries. If, therefore, you deem them worthy a place, please to lay them before the readers of the Farmer. J. B.

1st. What is the best manner of managing a stock of goats, particularly the best means of keeping them from scaling common enclosures; the safest time and manner of castrating, and what proportion of males should be kept in a stock?

2d. What is the best season for spaying hogs; also, what is the most favourable age of the animal for the operation; and the most approved method of performing it?

3d. Is there any cheap means of preventing the depredations of pigeons upon garden and other valuable vegetables, and at the same time keep a plentiful supply of this delicious bird for the table?

4th. In case of the twig of an apple tree being stuck into the ground and growing to maturity, (instances of which I have frequently seen) might, or would the fruit differ from the parent tree, or from a graft of the same twigs on any other stock; or is it the case, and if so, why is there any difference or preference given in one stock over another, provided the graft grows; (the whole of the stock being cut off, as far as my observation has been, when the graft is transplanted to the orchard?)

While on this subject I cannot forbear mentioning the fact, on my own experience, that the quickest means of rearing a good peach orchard, is by sticking the twigs or water sprouts (as they are termed) in the spot you wish the tree to stand; not one in a hundred will die in a common season. The time the buds begin to swell is the proper time to set them out. I have a nice young orchard of this description. This may not be new or important to many, or any of the readers of the Farmer; but I assure you it was both to me four years ago.

5th. What is the best timber for posts; that is, for gate posts and rail fences, &c. Is not our common post oak, especially when charred, as durable as most or any others, more rare and difficult to procure?

I have had some experience of the durability of the lightwood, sassafras, mulberry, chestnut*, and wild locust.

6th. In this section of the union, (western Georgia,) we have extensive chestnut forests; would the owners of those forests find their account in enclosing them for the benefit of their hogs; or is the chestnut mast subject to spoil and be lost, provided it is not gathered shortly after it drops?

Would the chestnut mast keep good on the ground (as many of the oaks do) for several months, a chestnut orchard would be an invaluable appertenance to a farm, exclusive of its excellence for rails; many of those noble trees are, no doubt, while this is writing, tumbling to the ground, and others girdling by the indiscriminate stroke of the axeman, to give place to Indian corn, which will probably support no more swine than the native growth would have done, without any other toil than enclosing it with timber of the same; (rails of which a good hand can cut and split 500 per day, and will last at least half a century.)

TIMBER.

The right time to fell timber for rails, buildings, and agricultural uses, generally is when the sap is in full flow; when the bark ceases to peel freely, the felling should be stopped.

In support of this opinion, it is alleged, that the operation is performed at the time that timber will season the soonest—becomes harder and firmer, in consequence of quick seasoning—the pores, being then full of sap, the drying of which leaves behind something of a glazy kind, having somewhat the benefit of oil paint—being harder and firmer than if felled in the winter; the worm is longer deterred from commencing its depredations, which is the main cause of the decay of all timbers.

To fell timber when the bark does not peel freely, is at a time of the year which takes a longer period to season, in consequence of which, and the absence of the sap, it never becomes so hard and solid; hence the worm, the great destroyer of timber, commences earlier its operations.

In most of the newly settled timbered countries, it was the general practice to leave valuable timber trees standing in the fields, which were girdled, or deadened, this operation being performed when the bark did not peel, the tree would stand up several

* Although a very durable timber for rails or other purposes above ground, it is objectionable for posts, on account of its aptness to rot off immediately at the surface of the ground.

years longer than if done when it did; and hence arose the opinion that the winter was the right time to fell timber to insure durability. If girdled when the sap is in full flow, the sudden stoppage leaves the trunk full of sap, a fermentation or sourness takes place, the bark prevents the escape of the moisture, the wood becomes soft, and the worm soon commences—not so if the operation is done in the winter.

A large beech tree may be girdled in the month of February, and one of the same character in every respect in the following May—the latter will rot two years sooner than the former; and so it would be of two trees felled at the same periods, and left with the bark on; but if made into rails (the bark taken off) or for other purposes, the latter would be much the most durable. L. S.

HORTICULTURE.

(Selected for the American Farmer.)

CULTIVATION OF THE VINE IN FRANCE.

The vine is cultivated in France in fields, and on terraced hills, as in Italy, but managed in a different manner to what it is in that country. Here it is kept low, and treated more as a plantation of raspberries or currants are in England. It is either planted in large plats, in rows three or four feet apart, and the plants at two or three feet distance in the row; or it is planted in double or single rows, alternating with ridges of arable land. In some cases, also, two close rows, and a space of six or seven feet alternate, to admit a sort of horse-hoeing culture in the wide interval. Most generally, plantations are made by dibbling in cuttings of two feet in length; pressing the earth firmly to their lower end, an essential part of the operation, noticed even by Xenophon. In pruning, a stem or stool of a foot or more, is left above ground, and the young shoots are every year cut down within two buds of this stool. These stools get very unwieldy after sixty or a hundred years, and then it is customary in some places, to lay down branches from them, and form new stools, leaving the old for a time; which, however, soon cease to produce any but weak shoots. The winter pruning of the vine generally takes place in February; a bill is used resembling that of Italy; the women faggot the branches, and their value as fuel is expected to pay the expense of dressing. In summer, the ground is twice or thrice hoed, and the young shoots tied to short stakes with wheat or rye straw, or whatever else comes cheapest. The shoots are topped, in some places, after the blossom has expanded, and the tops given to cows. In some places, also, great part of the young wood is cut off before vintage for feed to cows, and to let the sun directly to the fruit. The sorts cultivated are almost as numerous as the vineyards. Fourteen hundred sorts were collected from all parts of France, by order of the Compté Chaptal, and are now in the nursery of the Luxembourg; but little or no good will result from the collection, or from attempting to describe them; for it has been ascertained, that after a considerable time the fruit of the vine takes a particular character from the soil in which it was planted: so that fourteen hundred sorts, planted in one soil and garden, would in time, probably in less than half a century, be reduced to two or three sorts; and, on the contrary, two or three sorts planted in fourteen hundred different vineyards, would soon become so many distinct varieties. The pineau of Burgoyne, and the aubernat of Orleans, are esteemed varieties; and these, with several others grown for wine making, have small berries and branches like our Burgundy grape. Small berries, and a harsh flavour, are universally preferred for wine-making, both in France and Italy. The oldest vines invariably give the best grapes, and produce the best wines. The Ba-

ron Peyrouse planted a vineyard twenty years ago, which, though in full bearing, he says is still too vigorous to enable him to judge of the fineness and quality of the wine which it may one day afford. "In the *Clos de Vogois vineyard*, in which the most celebrated Burgundy wine is produced, new vine plants have not been set for 300 years; the vines are renewed by laying the old trunks; but the root is never separated from the stock. This celebrated vineyard is never manured. The extent is 160 French arpents. It makes, in a good year, from 160 to 200 hogsheads, of 260 bottles each hogshead. The expense of labour and cooperage in such a year, has arisen to 33,000 francs; and the wine sells on the spot at five francs a bottle. The vineyard is of a pineau grape. The soil about three feet deep is a limestone rock."—*Enc. Ag.*

Tokay grape and wine. The vine is cultivated to the greatest extent in Hungary. The well known Tokay is raised on the last chain of the Carpathian hills in the neighbourhood of the town of Tokay. The district extends over a space of about twenty English miles. "Throughout the whole of this country it is the custom to collect the grapes which have become dry and sweet, like raisins, whilst hanging on the trees. They are gathered one by one; and it is from them alone that the prime Tokay, or, as it is termed, *Tokay Ausbruch*, is prepared; which, in 1807, sold for 100 florins the cask of 180 halbes, on the spot. They are first put together in a cask, in the bottom of which holes are bored to let that portion of the juice escape which will run from them without any pressure. This, which is called Tokay essence, is generally in small quantities, and very highly prized. The grapes are then put into a vat, and trampled with the bare feet, no greater pressure being permitted. To the squeezed mass is added an equal quantity of good wine, which is allowed to stand for twenty-four hours, and is then strained. This juice, without further preparation, becomes the far-famed wine of Tokay, which is difficult to be obtained, and sells in Vienna at the rate of 12l. sterling per dozen.

The greater part of these vineyards is the property of the Emperor; several, however, are in the hands of the nobles.—*Bright's Travels.*

Another species of Hungarian wine, called *Mine-ser*, is said to equal Tokay; next to that in value comes the wines of Edenburg, Rusth, St. Gyorgy, and Ofen, followed by a great variety whose names are as various as the hills which produce them. The grape which is preferred for making the Tokay and other Hungarian wines of that character, is a small black or blue grape, figured and described by Sickler in his *Garten Magazine* of 1804, as the Hungarian blue.—*Enc. Ag.*

LADIES' DEPARTMENT.

HARMONY, GENEROSITY, &c.

(From "Hints for the Improvement of Early Education and Nursery Discipline.")

Thoroughly to establish the principles of strict justice in the conduct of those who rule, and in that of the children, one toward another, is the grand means of securing the peace and good order of a nursery, and the only sure ground work of harmony, mutual generosity, and, consequently, of love. The apprehension lest his property should be extorted from him; the fear of having his own rights, in any way, infringed; the suspicion that he may not receive his due—renders a child irritable and contentious: whilst the certainty that he himself shall be treated with entire justice and impartiality, satisfies his mind, composes his spirit, and prepares him to impart, with liberality, what he knows is altogether in his own power.

At the same time, the habit of nice attention, on his part, to the rights of others, teaches him the in-

valuable lesson of subduing his desires, and of expecting limits to his individual gratification. Thus the principle of justice, brought into full effect, cuts off the main sources of dispute and contention; prepares the way for a free and liberal spirit; is the surest preservative against an envious, suspicious temper; and is the first step towards overcoming that selfishness, which is the prevailing evil of the human heart. This evil must be carefully watched, and perseveringly counteracted, especially by guarding against it in our own hearts and behaviour; for, let it be remembered, that generosity and affection are virtues, which, from their nature, do not admit of being enforced by authority. We must not attempt to command them; nor should we upbraid children for the want of them, even towards ourselves, though we may do much to promote their growth, by this strict adherence to justice, by influence, instruction, and a judicious improvement of those natural feelings of kindness, which almost all children occasionally display. There are few who will not discover emotions of sympathy and pity at the sight of any sorrow or suffering, which they understand to be such; and these are the occasions for awakening their benevolence and compassion, not only toward their fellow creatures, but to every living thing. We should be particularly careful to lose no such opportunity of cultivating this tenderness of feeling among themselves. If one of the little flock be ill, or in pain, the others will, generally, shew an interest and sympathy—a desire to comfort and please him, which should be carefully cherished. The affections of elder children are also often called forth, in a lively manner, toward the younger. Now, although their attentions to the little one, may at times be troublesome to the attendant, she ought not hastily to suppress them—rather let her commend the younger to the care and protection of the elder, ever bearing in mind the importance of nurturing that *family affection*, so invaluable in the progress of life, and of which the foundation is generally laid within the first ten years of childhood.

Elder children are, on the contrary, sometimes inclined to tease, and domineer over the younger; though it is commonly those who have themselves been treated with tyranny, that are most disposed, in their turn, to become tyrants. This inclination is ever to be repressed: we are to point out the meanness, as well as the barbarity, of employing superior strength in oppressing, or tormenting the weak and the helpless; and uniformly to manifest our abhorrence of cruelty and tyranny, under whatever form they may appear, even when exercised toward the most insignificant insect. Let the first appearances also of a revengeful disposition be especially guarded against, both in our children, and in the conversation and conduct of those who are about them. If a child, in infancy, be encouraged to beat the table, against which he has bruised his head; if he be allowed to strike his brother, from whom he has received a blow; if he hear the language of retaliation and mutual reproach among his attendants, can we be surprised, if he display an irascible and vindictive temper, as his will and his passions are strengthened by age?

Although we are not to force upon children even the best instruction, nor urge them to an exertion of self-denial and benevolence, for which their minds are not ripe; yet we must remember the importance of raising their views, as they are able to bear it, to the christian standard of relative goodness. We may gradually inculcate the invaluable precepts, that we should forgive one another, as we hope ourselves to be forgiven; that "blessed are the merciful, for they shall obtain mercy;" that "we are to do to others as we would have them do to us"—"having compassion toward all; being pitiful and courteous; remembering 'the words of the Lord Jesus,' that 'it is more blessed to give than to receive.'"

How many of the fairest opportunities will natu-

rally present themselves, especially to a mother, when the hearts of her little ones are touched, not only of inculcating these divine injunctions, but which will still more avail, of tenderly infusing the spirit they breathe, by sympathy and influence?—Nor is it only the precepts of the New Testament, which may assist us on these occasions, we have also to point out the example of Christ. We have to inculcate the habit of contemplating his character, not only to be loved and admired, as perfect in itself, but as a pattern for us, as the standard at which we are continually to be aiming, as that which is intended to produce the strongest effects upon our lives and affections. It is to be lamented that of this perfect pattern, we make so little practical use, that it is so little brought to bear upon the daily conduct of life. No religious instruction is better suited to the minds of children, than that derived from the example of Christ; and no part of this example more calculated to touch their hearts, than the compassion, the tenderness, the consideration of the wants and feelings of others, which he so perfectly displayed.*

Children may be easily trained to exercise kindness and liberality towards the poor; they will experience a pleasure in relieving their wants. When old enough, the boys may be induced to save money; the girls to make clothes for the poor families, with whom they are personally acquainted. It is important that the *habit* of giving freely should be early established; for the usefulness of many characters is materially abridged through life from the want of this habit. With good and benevolent intentions, they know not *how* to dispense liberally, or *how* to open their hands freely. Mutual presents, if altogether voluntary, have also a happy tendency in promoting family affection and good will. But, in endeavouring to foster liberality, it must never be forgotten, that *kindness is not to be forced*.

Children, as they advance in age, should be taught to distinguish between that true generosity which involves self-denial, and that which costs them nothing—between a generosity which springs from a desire of applause, and that which is simply the result of benevolence and a sense of duty.

* The compassion and tenderness of our Lord will be strongly illustrated by contrasting them with the behaviour of the disciples. Excellent as they were as men, their impatience, and even want of charity, on many occasions, sufficiently prove, how wide is the difference between human virtue, and divine perfection, between that exalted standard which is set before us for our imitation, and the conduct of those who have most nearly approached to it. It was the language of the disciples, "Send the multitude away that they may go into the villages and buy themselves victuals." Jesus answered, "Give ye them to eat!"—"I have compassion upon the multitude, I will not send them away fasting, lest they faint by the way." (Matt. xiv. and xv.)

The followers of our Lord "charged the blind man that he should hold his peace." "Jesus stood still, commanded him to be brought unto him, saying, What wilt thou that I should do unto thee? Receive thy sight, thy faith hath saved thee." (Luke xviii.)

When parents brought their young children to Jesus that he should bless them, the disciples rebuked them. "Jesus was much displeased, and said unto them, Suffer the little children to come unto me, and forbid them not. And he took them up in his arms, put his hands upon them, and blessed them." (Mark x.)

When the Samaritans refused to receive their master, the disciples would have commanded fire to come down from heaven to consume them. Jesus answered, "Ye know not what manner of spirit ye are of; the Son of man is not come to destroy men's lives, but to save them." (Luke ix.)

When his enemies surrounded our Lord with swords and staves, "Simon Peter having a sword, drew it, and smote the High Priest's servant; and cut off his right ear—then said Jesus unto Peter, put up thy sword into the sheath." "And he touched his ear and healed it." (Luke xxii.—John xviii.)

It is desirable that the play-things, books, &c. of each child be marked with his own name. This prevents many disputes, by facilitating that regard to individual property before recommended. When the division of any common treat is left to the children themselves, it is a good regulation that the divider is always to expect the last choice himself; and that the absent are particularly to be remembered—the most liberal shares to be reserved for them.

These observations may appear unnecessarily minute; but it is by little things that children acquire habits, and learn to apply general principles: "To a fond parent, who would not have his son corrected for a perverse trick, but excused it, saying it was a small matter, Solon wisely replied, 'Aye, but custom is a great one.'"

SPORTING OLIO.



FOX HUNTING.

Hark! Hark! the joy inspiring horn,
Salutes the early rising morn,
And echoes through the dale;
With clamorous peals the hills resound,
The hounds quick scented scour the ground,
And snuff the fragrant gale.

TO THE EDITOR OF THE AMERICAN FARMER:

SIR—Believing that an account of the late meeting between seven couple of dogs of the Baltimore hunt, and a like number of the Bridge (Potomac) pack, will be acceptable to some of your readers, I give you a short account of five days' sport.

Tuesday, 30th ult.—Met by appointment at Rossburg, where we were joined by a party of gentlemen from Bladensburg, with seven dogs, making a pack of 35 in number. Rain fell until eleven o'clock, when the dogs were uncoupled, and about twenty gentlemen, impatient for the chase, mounted their horses, and took a direction to the west. Many covers were drawn without finding; at length a fox was unkenelled near the Montgomery turnpike. He went away for the broken ground on the north-west—here another fox was unkenelled, and the dogs divided. One fox, with fourteen dogs hard at him, made for the covers, two miles down the creek, where he ran in circles for an hour, after which he broke away through the estate of Mr. Diggs, and through a part of the District of Columbia, crossing the Baltimore road between Washington and Bladensburg, near the spot where Commodore Barney was wounded, and passing the eastern branch on the ice, was killed in Prince George's county. Owing to the heavy riding and the badness of the ground over which he ran, not a horseman was within eight miles when the chase ended. The other fox kept doubling on the broken ground, occasionally crossing to the pine cover where the first fox was found. The writer is not informed of the result, having at sun-down made the best of his way to Graciff's; where the whole company was soon re-united in good trim to enjoy the cheerful fire and cheerful board that awaited us; and where the evening was spent most pleasantly in conning over the feats of the dogs, and the inci-

dents of the day, enlivened by appropriate songs, and amongst others, by G——, in his best style,

Bright Chanticleer proclaims the dawn,
And spangles deck the thorn,
The lowing herds now quit the lawn,
The lark springs from the corn;
Dogs, huntsmen, round the window throng,
Fleet *Juno* leads the cry,
Arise the burden of my song,
This day a stag must die.

CHORUS.

With a hey, ho, chevy,
Hark forward, hark forward, tantivy,
Hark, hark, tantivy,
This day a stag must die.

The cordial takes its merry round,
The laugh and joke prevail,
The huntsman blows a jovial sound,
The dogs snuff up the gale;
The upland hills they sweep along,
O'er fields, through brakes they fly,
The game is rous'd; too true the song,
This day a stag must die.

With a heigh ho chevy, &c.

Poor stag, the dogs thy haunches gore,
The tears run down thy face,
The huntsman's pleasure is no more,
His joys were in the chase;
Alike the generous sportsman burns,
To win the blooming fair,
But yet he honours each by turns,
They each become his care.

With a heigh ho chevy, &c.

Thus ended the first day's sport.

Thursday, 1st February, inst.—The Baltimore and Bridge dogs after a long trail, unkenelled a fox on the Virginia side, near the factory. His first run was along a road for more than a mile to Chapman's old fields, where he doubled, first to the left, and returning, crossed the road and breasted the open country to the wood, back of Arlington, the residence of Mr. Custis; turning then to the left, he made for the Georgetown ferry, which he soon reached, and doubling short round, he took his back track, passing Arlington, and through Chapman's old field, made good the pine covers west of the Doctor's branch. After one circle round the pines, he again breasted the open country holding the dogs at a safe distance, and ran again to the ferry, and back to the Doctor's branch. Although he still kept several minutes ahead of the pack, it was evident the dogs were running to kill; they carried the scent breast high, and ran without check. The fox doubled back for Arlington woods, which reaching, he doubled to the right, passed the low grounds near the bridge, passed on to the Piney hills, where he was killed after a chase of three hours and a half. This was the most interesting chase of the season; the fox was viewed repeatedly, and the dogs were almost always in sight.

Saturday, February 3d.—The same dogs found a fox near Arlington, and seven went away with him to the Falls hills, at such a slashing rate, and in a course so straight that all the horsemen and the balance of the pack, at the time on the trail of a grey fox, were thrown out. This may be called a blank day.

Tuesday, Feb. 6th.—A gentleman from Fairfax joined by appointment with seven dogs, among them the famous hound *Ruler*. Found on Piney hill; doubled round that and broke away for a distance of three miles through the low, and chiefly open grounds, leaving Arlington to the left, and the Georgetown ferry to the right, reached Gen. Jones's farm, doubling to the left, made the Doctor's branch; down that, crossed the four mile creek to the Factory hills; re-crossed the four mile creek to Piney

hill;—he now made a straight run through the old fields to Gen. Jones's, doubled to the right, and made the Georgetown ferry; kept down the river's bank, opposite Mason's island, passed the low grounds near the bridge, doubled round Piney hill, and was run into and killed there, after a chase of two hours and three quarters. This was the second best chase of the season; and what was remarkable, though it rained incessantly, there was never a loss of a minute's duration.

Thursday, Feb. 8th.—The Fairfax and Bridge dogs met by appointment at the Four mile run—found a grey fox, which was killed after an unusual long run of two hours.

As soon as the day, dawning forth from the east,
Has night's humid curtain withdrew,
The huntsman arises and winds the sweet horn,
Inspiring the musical crew.

And now they're unkenell'd, and dashing abroad,
So wantonly frolic and gay;
Then clustering submiss, by the whip and voice aw'd
Thus trotting to cover away.

See thro' the copse, how the hounds spread and try,
Examining each likely haunt;
Hark! I heard *Rattler* drag him, preluding a cry.
How they join him, and merrily chant!

As they get nearer to him, the chorus it fills,
Hark! hark! now the villain is found!
How grand is the crash while back from the hills
Echo gladly returns the sweet sound.

The ploughman and woodman their labour forsake,
To tally him off see them run!
If not headed back, he soon now will break.
There's a halloo—by zounds he is gone!

All wild from the covert away burst the hounds,
Ambitious to lead, see each strive;
Now the scent having lost, see them fling o'er the grounds,
There they have it again—how they drive!

Hold hard!—they're at check!—how obliquely they spread,
There that wide-casting bitch, see, has hit him!
Now see the old hounds, how they press to the head!
A sure sign the villain is sinking.

This loose now will do him, his wiles avail naught,
See them run out of scent into view!
Ev'ry hound's chopping at him!—by Jove then I thought—
Now *Slim!* and then *Spring!*—who! whoop!

The hounds, quite transported with greediness, feast;
The horn now proclaims he is dead:
The sportsmen all pleas'd, but no one more bleas'd
Than he whose good hound kept the lead.

In perfection this glorious sport to enjoy,
At your table let *temp rance* preside;
Ruddy health a companion you'll constantly have,
And contentment will sit by her side.

PEDIGREE OF TUCKAHOE.

[Furnished by a gentleman to the south.]

Tuckahoe was bred by John Wickham, Esq., of Richmond, Va., and was sired by *Florizel*. *Florizel* was one of the most unequalled race horses ever raised in Virginia, having never paid forfeit or been beaten; the utmost of his speed (like the English *Eclipse*) was never known, as no horse that contended against him could come within reach of his heels. He was a horse of fine size, (sixteen hands,) and commanding appearance, and yet possessing fine symmetry and uncommon activity. He was got by the imported horse *Diomed*; he by *Florizel*; and he by King Herod. King Herod, in nineteen years, got the astonishing number of four hundred and ninety-seven winners, who won two hundred

thousand pounds sterling, nearly equal to a million of dollars. The dam of Florizel, by the imported Shark, granddam by Harris's Eclipse, (a son of old Fearnought, out of an imported mare—imported Fearnought—imported Shock, &c. &c., being thorough bred.) The dam of Tuckahoe, by the imported horse Alderman, granddam by the imported horse Clockfast, (half brother to old Medley,) great granddam by old Wildaire, one of the finest stallions ever raised in Virginia, being got by old Fearnought, dam by Jolly Roger, out of the imported mare Kitty Fisher.

MISCELLANEOUS.

BANKING SYSTEM.

[We have been for a long time impressed with the truth of the reflections contained in the following extract. They are not now promulgated for the first time; if we mistake not, they agree with the predictions of those who were opposed to the charter of the Farmers' Bank of Maryland, and to the whole scheme of country banks in our state. Too many of the evil consequences foretold at that time, have since become melancholy matters of fact; and if it be now too late to redeem the broken fortunes of those who have been swallowed in the vortex, it may yet be time enough to warn those who are approaching under full sail, and in easy confidence, the margin of the same whirlpool, unconscious of their danger. The evil effects upon the landed interest, which result from *easy borrowing, on short discounts of uncertain continuance*, are here described with a liveliness and truth that reminds us of remarks on the same subject, by the well known and deservedly popular author of "Letters from the South." Perhaps the pamphlet from which they are taken may be by the same pen. We have only seen what has been copied from it, by the Editor of the New York Evening Post.]

"But however dangerous may be the temptation, and injurious the consequences of an unlimited paper system, to the mercantile community, there is another, the largest, the most wealthy, and the most valuable portion of this or any other state, to whom the multiplication of little banks, is still more injurious. I mean the farmers; the owners and cultivators of the land, whose labours are the blessing of every country, and whose products the staff of life to all mankind. I speak of what has passed under my own eyes, when I say that a country bank is a nuisance of the worst kind to all parts where its influence extends. It at once begets among the farmers a taste for expensive improvements, and is the parent of a thousand imaginary wants, which it affords at the same time the momentary means of supplying. The old Dutch barn, which answered the purposes of his honest old fashioned father, and his own, must be pulled down, and replaced by one of a more improved construction, and far more expensive. One expense begets another. The house which kept the old barn in countenance, and was kept in countenance by the barn, can no longer hold up its head; it is disgraced by the modern structure and must also be pulled down, to make way for a palace, which is far too large for the ground to which it appertains. A new house requires new furniture, and a mode of living to correspond with the rest of the new creation. There is a capital mill seat on the farm, and though there are a plenty of mills for all the uses of the neighbourhood, the demon of speculation whispers him to build a merchant mill, with all old Oliver Evans' machinery, and heaven knows what other improvements besides. Thus he goes on with improvement upon improvement, till he is over head and ears in debt.

But where does he get all the money for these improvements? Thus it is: A liberal, kind-hearted man, belonging to one of these little country banks, for whose paper there is no earthly necessity in transacting the business of the neighbourhood, falls *accidentally* in his company, at an election, or at the little market town, and begins by wondering why he don't build a new barn, a new house, a new mill, or undertake some other great improvement on his farm. Every thing is rising at the moment in its nominal value in consequence of the floods of paper poured forth by the new bank; and those improvements will enable him to sell his farm to great advantage, and make a capital speculation. The people of the United States are a race of men having few, if any equals in the world, in all the essentials of a great nation. But they have their foibles. They cannot harden their hearts against the seduction of SPECULATION. At that magic word, their eyes begin to sparkle; they prick up their ears, and snort, and curvet, and caper about, like the young war-horse in the meadow, when he hears the sound of the trumpet. Like him they run from one side to the other, poking their heads through the fence, or measuring its heights with their arched necks to see if it can be cleared at a bound. Nothing can restrain them, and finally, they either break down the barrier or leap the gate, and away they go, looking neither to the right or the left, before or behind, in their ardor to follow the empty sound. So with our honest farmer. He listens—and is overcome. He is determined to make a speculation, and nothing delays him a single moment but the want of means.

"These are promised him with unlimited generosity, by the liberal gentleman aforesaid. It is only to give his note backed by a mortgage, or assignment of his land, and money will rain down in showers. The note will be renewed at the end of sixty days, as often as he wishes, and in the interim there will certainly be opportunity for a great speculation. The bait is swallowed; the note signed, the mortgage recorded in *doomsday book*—the money received and the mill built; but no grist comes to it—and a mill without grist is but a poor speculation. Sixty days are like sixty minutes, to a man that has a note to pay. Time limps with creditors, but flies with debtors. The note is renewed, with the interest added. It is astonishing, gentlemen, how a debt grows, when it is thus fed with a meal of interest every sixty days. The agent of the bank, who very likely has a notion of making a snug speculation himself out of the farm, watches our honest farmer as a cat watches a mouse, and plays with him as prettily, till it is time for the *coup de grace*. All at once the bank is hard pressed for money, and the note which by this time has nearly approached to a tolerably fair price for half the farm, must be paid. The farmer tries to sell his farm, and realize his great speculation. But no man ever gets a great price when it is known that he must sell. Besides, the little bank has it always in its power to make money scarce in the neighbourhood, by calling in its loans or refusing discounts. The catastrophe is inevitable—the farm is sold, and ten to one, bought in by the bank, at a great sacrifice; and the next thing you hear of our honest farmer, he is on his way either to jail, or to Missouri or Arkansas, in search of a new speculation. I have seen half a township, aye, gentlemen, half a county, change hands in this way, before the final catastrophe—to wit: the failure of the bank, and the loss to the public of perhaps three times the *real* amount of its *nominal* capital. It is a fair exchange—rags for lands and houses—a crust of bread for a shoulder of mutton—a shadow for a substance.

"Such consequences are not accidental, but inevitable. I have visited many parts of this country, and been much conversant with the life and history of the farmers. I was born and brought up among

them, and have ever been in the habit of taking a great interest in their prosperity, because I know, that they constitute the back bone, the very marrow and sinew of this nation. The other classes merely crawl upon the outside crust of the country; but the cultivator of the land is anchored in its bosom, and is as much a piece of his farm, as a sailor is of his ship. In all my observation and experience, I can honestly declare, I never knew an instance of a country bank, which did not eventually produce such a state of things as I have described. And it cannot be otherwise—it is in the nature of man, and in the nature of things, that it must be so—it is the eternal law of necessity, which forever connects effects with their causes. Wherever you throw temptation in the way of men, and at the same time afford them the means of gratifying their longings, you do all that is necessary to ensure their yielding to these temptations. The first and most certain consequence of establishing a bank among a simple race of yeomanry, is to tempt them from their usual habits of economy and prudence. The examples of those who share in the favours of the bank; the improvement and embellishments they are thus enabled to make; and the increase of luxuries they display in their style of living, are but too apt to tempt others to participate in these novel delights. Men do not like to see those with whom they have been hitherto on an equality, suddenly shoot ahead of them in the voyage of life; and one single example of splendid pauperism in the person of a dependant on a country bank, is sufficient to lead a whole neighbourhood into a habit of taking up money, in loans of sixty days.

"The remarks which I took the liberty of offering, upon the mischievous disadvantages of these short accommodations in the mercantile community, apply with ten fold force to the business and condition of the farmers. The merchant buys one day, and sells the next; and that punctuality with regard to pecuniary engagements which is essential to his existence, enables him to calculate with some degree of certainty, on receiving, or being able to pay, a certain sum of money on a certain day. Besides this, he enjoys in various ways, facilities for meeting his engagements, unknown to the farmer, who deals but little in notes of hand, and is not considered a bankrupt if he omits to pay on a specified day. The merchant, moreover, if in any regular business, will, generally speaking, be able to make by his bank accommodations, enough to pay the discount, and a little besides for himself. But the farmer who can afford to pay six or seven per cent. for money out of the produce of his farm, must rise early and work late—he must live upon rye bread and salt pork, and carry all the rest to market.—This is the case where he pays interest only once a year, and the creditor is content to wait till he can thresh his grain, kill his hogs, and bring to market all he has to sell. But it is infinitely worse where the liability of payment recurs, regularly, every sixty days, and where the interest *must* be paid on a certain day, or added to the principal. His harvest of wheat; his haymaking; his beef and his pork; his receipts of money, in fact, only happens once a year, and once only, or at most, twice in the year, is he prepared to pay any considerable sum of money. How then can he endure for any length of time, this rapid succession of demands, and this unceasing accumulation of interest? I never knew but one farmer, who survived a bank discount, and he was happily preserved from certain destruction, by the bank being ruined, before it had time to ruin him.

"Thus it is, gentlemen, that a deceitful painted spectre of prosperity is seen to stalk for a while in the neighbourhood of one of these pernicious institutions. The houses become better; the barns more capacious; the fences more neat, and the fields are dressed in smiles. But the heart of the poor t at will, rejoices not in what now no longer be."

to him. His pillow cases are finer than they were, but they pillow an aching head—his curtains are far more fashionable—but they hide an aching heart, and a sleepless man. He can no longer look out in the bright sunny morning on his inheritance with the calm satisfied eye of unincumbered possession; nor stand as he once did, erect and independent before the first in the land. He is in debt and a slave to others. The profits of his land—the land itself, belongs not to him; and thus a race of honest, industrious, virtuous, and independent farmers, is exchanged for shingle palaces—painted fences—unnecessary outbuildings, and the superfluous trumpery of a genteel drawing room, for country gossips to meet in, and envy their neighbours the possession of some gilded gewgaw.

"How is it that a bank is necessary to its attainment? Either the projectors of this undertaking for the public good have the capital or the credit necessary to its completion, or they have not. If the former, then a bank is not necessary; if the latter, I would ask, who takes the risk of the failure of the project? Certainly the people at large, among whom the notes of the bank have been circulated. If the project fails—if the funds are embezzled, misapplied—or if the cost, as is generally the case, far exceeds the original estimates, and the bank fails; as a matter of course, the holders of its notes are the sufferers, and the public, as is usual in all these projects for the public good, either directly or indirectly, pays the price of the failure.

"In the history of these projects, based upon banking privileges, the bank has generally, if not always, been found to depend upon the success of the former. Where the object was really prosecuted in good faith, the failure of the project was either preceded or succeeded by the failure of the bank. But the ordinary course has been, and probably will continue to be this:—the public good having answered its purpose of a ladder, by which the real object, the bank, was obtained, is kicked away without ceremony; the project is left to die a natural death, while the bank continues in operation, to the marvellous benefit of the projectors."

MIGRATION OF BIRDS.

Campbell's Station, Tenn., Jan. 30, 1827.

MR. SKINNER,

Sir,—The wild pigeons have this day been passing this place, going north, in vast numbers. S. M.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 16, 1827.

"We wish that every friend of this journal should understand, and that they would have the kindness to make it known, that to any one who will procure four subscribers and remit their \$20, we will send the American Farmer without charge—or, any one who will procure five subscribers, will be allowed to retain \$5 on his remitting the remaining \$20. We beg also to repeat, that all which is necessary to be done by any one, wishing to subscribe, is to inclose a five dollar note by mail, at the risk of the Editor of the American Farmer, Baltimore—and whether the money be received or not, the paper will be forwarded immediately, and the actual receipt of each number of the volume will be guaranteed by the Editor.

The American Farmer is published weekly—about one half, or four pages, devoted to practical Agriculture; the remainder to Internal Improvements, Rural and Domestic Economy; selections for housekeepers and female readers, and Natural History and Rural Sports. A minute index, and title page to the whole volume, is published and forward-

ed with the last number. A single number will be sent to any one who may desire to see a specimen of the publication. To all editors who will give the above one or two insertions, we shall feel much indebted, and will gladly reciprocate their kindness.

P. S. The American Farmer is circulated through every state and territory, and is written for by many of the most distinguished practical farmers in the Union.

At the instance of Mr. Buchanan, delegate from Baltimore county, entitled, already, by his industry and intelligence to be ranked amongst the leading members of the legislature of Maryland, a committee has been raised in the House of Delegates—called the *Committee on Agriculture*. Assuredly there is a wide scope and ample occasion for inquiries into the causes of the decline of agriculture. A bill has just been past by the House of Representatives in Congress, to insure a fortunate result to the few holders of large capitals employed in woollen manufactures. Can any thing be done, in the way of legislative help, to save from ruin the many whose little all is in the soil?

It is stated in a Boston paper of the 6th inst., that there were received the day before, in a long train of sleds, about 20,000 lbs. of wool, consigned to Messrs. Livermore & Dunn. This wool is from sheep kept in the town of Orrville, Vermont—where it is estimated 100,000 lbs. of wool were sheared last year; and where, we are told, there are individuals who keep from 600 to 3000 sheep.

ECLIPSE.—We mention for the information of the breeders of blooded horses, that Eclipse will stand the ensuing season in the vicinity of Brunswick county, upon the border of North Carolina. This situation has been selected as most central, and with the view of accommodating the many gentlemen in Virginia, North and South Carolina, owning mares of the Sir Archy stock.

The different papers (especially those to the South of New York,) will confer a favour on the owners of blooded mares, by inserting this notice, as Eclipse will certainly return to the North in the fall.

TOBACCO.—The reason for not making particular mention of this article, is because there is nothing doing with it. If any thing occurs to make a stir in the market, our readers shall be apprized of it.

Hay is selling for \$18 per ton—Straw, \$12.

WANTED,

A person capable of erecting a Pigpen, on the plan set forth and established by Mr. N. Ingersoll, of Massachusetts—a description of which, with all the fixtures appertaining to it, can be found in the 5th volume of the American Farmer, 2d January, 1824. Apply at this office. Feb. 16.

FOR SALE,

A full blood Devon Cow, three years old, with a Devon bull calf by her side. To save trouble, the price asked for them is \$120. For particulars, apply at this office. Feb. 16.

CONTENTS OF THIS NUMBER.

New objects for the attention of Maryland and Southern Farmers, On the Cultivation of Hops—Characteristics of Flemish Husbandry—Agricultural School of Moegelin, in Prussia—Sheep, inquiry—Queries—Time of Cutting Timber for Rails—Cultivation of the Vine in France—Hints for the Improvement of Early Education and Nursery Discipline, Harmony, Generosity, &c. Fox Hunting near the District of Columbia—Pedigree of Tuckahoe—On the Banking System—Migration of Birds—Editorial items.

PRICES CURRENT.

ARTICLES.	per	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bb.	9 00	9 50		
BACON, and Hams, . .	lb.	6	10	9	12
BEEF-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16½	20	22
Havana,	—	14	16		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	23			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	15	16	18
Dipt,	—	11	13		16
CHEESE,	—	8½	12	12	15
FEATHERS, Live, . . .	—	29	30	37	
FISH, Herrings, Sus.	bb.	2 37½			
Shad, trimmed, . . .	—	5 50	6 00		
FLAXSEED,	bush	1 00	1 10		
FLOUR, Superfine, city,	bb.	5 25			
Fine,	—	5 25	5 50		
Susquehanna, superfi.	—				none
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	55			
white	—	55			
Wheat, Family Flour,	—	1 10	1 20		
do. Lawler, & Red, new	—	1 00	1 05		
do. Red, Susque. . .	—	1 10	1 15		
Rye,	—	70	75		
Barley, Eastern . . .	—	1 10	1 20		
Do. country	—	90	1 00		
Clover Seed, Red . .	bush	6 00	6 25		
Ruta Baga Seed, . . .	lb.	87		1 00	
Orchard Grass Seed, .	bush	3 50			
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed,	—	4 00		5 00	
Oats,	—	45		50	
Beans, White,	—	1 50		2 00	
HEMP, Russia, clean, .	ton	250	260		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb	18		25	
HOGS' LARD,	—	9	10	12	
LEAD, Pig	lb.	6½	6½		
Bar	—	7½	8		
LEATHER, Seal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.		50		75
Havana, 1st qual. . .	—	30	32	37½	
NAILS, 6s20d.	lb.	61		9	
NAVAL STORES, Tar, .	bb.	1 50	1 62½		
Pitch,	—	1 75			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	33	34	40	
Spermaceti, winter . .	—	75		88	
PORK, Baltimore Mess,	bb.	11 50	12 00		
do. Prime,	—	9 00	9 50		
PLASTER, cargo price,	ton.	3 25			
ground,	bb.	1 50			
RICE, fresh,	lb.	3½	3½	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	8	10	12
WHISKEY, 1st proof, .	gal.	34	36		50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	31	32	50	
SUGARS, Havana White,	c. lb.	13 00	13 50	14	15
do. Brown,	—	10 00	10 50		
Louisiana,	—	8 00	9 10	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	15		25	
SALT, St. Ubes, . . .	bush	50		75	
Liverpool ground . .	—	50		75	
SHOT, Balt. all sizes, .	c. lb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Port, first quality, . .	gal.	1 65	1 65	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	22		
Common, Country, . .	—	18	22		
Skinnners' or Pulled, .	—	20	25		

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AGRICULTURE.

ON THE CULTIVATION OF HOPS.

(From the Memoirs of the Board of Agriculture of the State of New York.)
(Excluded from page 378.)

In the poling, which is the next operation to be performed, the common rule is to begin as soon as the binds have advanced two or three inches above the surface of the ground, which is in general about the latter end of April, or beginning of May. The number of poles that are the most proper and advantageous for each hill, has not been yet well ascertained by planters; but as it has been shown that a full and free admission of air, light and sun, is essentially necessary to the healthy growth of the plants, they should never be too much crowded. Three is the most usual allowance, though a greater number is often employed. They should be placed in such a manner as to leave the largest spaces or openings towards the south or south-west, that the plants may derive the more full influence of light and heat, and the stoutest on the side which has a northern aspect, the more powerfully to resist the winds. The poles are most commonly fixed in the ground by means of an iron crow, with which holes to the depth of eighteen or twenty inches are formed, and the sharpened root ends of the poles forcibly placed in them, the earth being immediately afterwards well rammed, or trodden about them.

The difficulty of this business chiefly consists in pitching the holes to proper depths; in setting the poles down with such exertion as that they may fix themselves firm at the bottom, and that the tops of the poles may have such a direction outwards, as to obviate as much as can be the housing of the binds. Where due attention is not bestowed on these points, much injury and loss may be sustained by the destruction of the plants. When the poles are set, two or three of the binds may be directed up each of them, being tied, in the manner, advised before, in different places by labourers employed for the purpose, and which is to be repeated as there may be occasion for it. When the poles are high and the binds strong, standing ladders may be useful in tying them near the tops.

It has been observed that this work demands particular attention in the early part of the summer. When short and slender poles have been put to hills where the binds prove of strong and vigorous growth, it may sometimes repay the trouble to have them removed, and others of a taller and stronger kind put down in their stead. The benefit obtained by this practice is often considerable.

During the summer in the more early growth of the plants, the superfluous binds of every kind should be repeatedly removed as they present themselves, reserving only one or two on each hill to supply the places of such as may be hurt in being trained to the poles at first, as accidents of this nature often occur, in consequence of the tender buds being bruised or rubbed off by the agitation of the winds.

This is the whole of the culture that is required till the season at which the hops become ripe, and are ready to be picked, which is known by the fragrant smell which they emit, their becoming firm, and acquiring a brown colour. It is usually about the beginning or middle of September.

Much care and circumspection is necessary in the performance of this business, to see that every thing proceeds with regularity and despatch, as there is always much danger from delay, the crops being equally exposed to injury from the winds as continued rain. As a preparation for this business, baskets, bins, or cribs, are procured or formed, in number proportionate to the extent of the planta-

tion and the pickers that are to be employed. The latter are constructed by nailing four or more pieces of boards on as many upright posts as frames set into the ground. When finished, they are about seven or eight feet in length, three feet in breadth, and about the same in height. The apparatus being thus made ready, the hop-binds are cut over close to the surface of the land by a person accustomed to the work, and the poles drawn up by a tool for the purpose, which is termed a *dog*, or *pulling-hook*. They are then placed upon the frame with the bind upon them, mostly two, but sometimes three, in order to be picked: three, four, or more pickers being employed in clearing the binds of the hops on each side of the different frames; these, with the person engaged in sorting the poles, are denominated a *set*. Women and children are frequently employed in this work. The hops, after being carefully separated from the leaves and binds, are dropped into a large cloth hung round on tenter hooks within, underneath the frame. When this has been filled, the hops are put into a large sack, in order to their being taken home, to be dried on kilns for the purpose. This should always be performed as expeditiously as possible after the hops have been picked, that they may not sustain any injury by remaining together in their green moist state; as where this is the case they are often liable, especially when the weather is warm, to be much damaged, both in colour and flavour, in the course of a few hours, by the heat which they take on. For this reason it is necessary to keep the *oast*, or kiln, constantly at work, both night and day, during the time of picking. The number of pickers should, therefore, be as nearly as possible proportioned to the quantity of hops that can be dried off by the *oast*. And where, from the nature of the season, or other causes, the undried hops are suffered to accumulate, they should always be placed only a few together, without being closely packed.

In cases where the crops are pretty abundant, a diligent picker will separate from eight to ten bushels a day, which, when dried, may weigh about one hundred weight. It is usual in many places to let the picking of this crop by the bushel. The price is variable, according to the abundance or scarcity of labourers. From sixteen to twenty expert pickers will be necessary in favourable seasons and where the produce is rather abundant, to keep an *oast* at work that is capable of drying off eighty bushels at each measuring.

Beside the pole-puller and pickers, another person will be requisite in the hop plantation, in order to pick up the scattered branches of the binds, and convey the produce to the kiln. A boy is in general employed in this business, who, from the nature of his work, is commonly called the *pokeboy*. The conveyance of the hops is accomplished by means of a cart, horse, or hand-labour, according to the distance of the plantation from the kiln.

The *drier*, or person employed in the kiln, should be perfectly acquainted with the business, regular and steady, as much of the planter's profit depends upon this work being properly performed.

The wages of the different persons engaged in these operations, are always considerably influenced by local and other circumstances. In Kent, before the late advances in the price of all sorts of farm labour, it was usual for the pole pullers to have from eighteen pence to two shillings the day, with small beer; the driers half a crown, with an unlimited allowance of both beer and spirits; the pickers from three half pence to two pence the bushel, with allowance of spirits, &c. These wages, however, at present, are greatly advanced.

Where what is termed a *cockle oast* is made use of, sea coal is mostly employed as fuel; a chaldron being considered the proper allowance to a load of hops. But where *hair kilns* are in use, as the smoke of that sort of coal would be injurious, charcoal is

had recourse to for the purpose, which in Kent is generally bought for about fifty shillings the load, which consists of fifty sacks.

For the convenience of bagging the hops, a round hole or trap is prepared in the floor of the stowage room, exactly equal in size to that of the mouth of the bag, on which a frame of wood is placed, to which the edges of the opening of the bag are securely attached all round. A very small handful of hops being then tied firmly in each of the lower corners, the bag is let fall below, and a person termed the packer, gets in, and with a heavy weight, which he keeps continually moving round, where he is not immediately treading, tramples and presses the hops down as closely as possible into the bags, as they are thrown in, in small quantities, by another person employed for the purpose. In this manner he proceeds until it is quite filled, when each of the upper corners has a few hops enclosed in them in the same way as the others, which serve the purposes of handles; and the bag is drawn up, and the mouth of it well secured, after being disengaged from the frame. In performing this business, the closer the hops are pressed into the bags the better, as they preserve their colour, smell and taste more perfectly.

In the operation of drying and rendering hops proper for the bag, some loss of weight must of course take place. According to some, sixty bushels of well ripened, fresh gathered hops, which have not been attacked by the fly, will produce, when dried and bagged, about one hundred weight.

The goodness of a sample of hops depends upon different circumstances, as the clammy feel of the yellow, farinaceous, powdery substance which is sprinkled over them, and their colour. The former, in the language of the hop planter, is termed the *condition*, and the sample is esteemed the more or less valuable by the buyers, in proportion as the feel is more or less clammy; and in regard to the latter, it is of the utmost importance in the sale of the hops, that it should be preserved as bright as possible; though it is not always the case that those which are the brightest in their appearance are the strongest in flavour.

It is this property, however, that induces the planter to make a distinction in the bagging of the article. The brightest hops, and those which have the finest colour, are put into bagging of a better quality, and termed *pockets*; while those of the brown kind form bags, being put in bagging of a coarser and more heavy sort. The first sort are made use of in the brewing of ales and all the finer sorts of malt liquor; but the latter chiefly in the making of porter. Where hops are to be kept for some length of time, the coarse bagging is, however, the best.

The length for a bag is about two ells and a quarter, and that for a *pocket* nearly the same, each having an ell in width. The former, where the hops are good, well cured, and tightly trodden in, weigh about two hundred and a half; and the latter, when of the Canterbury pocketing, about one hundred and a half; where they much exceed or fall short of these weights, it may be suspected that they are either of an inferior quality, or have been injured in their preparation. The planter will be best directed in respect to the duty on hops, by perusing the excise laws respecting them.

After these operations have been performed, it will be proper to clear the poles of the binds, and set them up in stacks as soon as possible, unless, as is sometimes the case, it has been done at the time of picking, as they are apt to sustain much injury by remaining upon the ground with the bind upon them. The work is usually performed by the acre, the poles being piled up into square stacks; thirty or forty poles being set to each corner, which should stand about twelve feet apart in each direction at the base, the tops uniting as closely as possible. In

this way an opening is formed below, which contributes to dry and preserve the poles.

At this period all such poles as are too short, or in any way improper for further use, should be laid aside, in order that such of them as are suitable may be employed in the new plantations; and that the planter may fully ascertain the proportion of fresh poles that may be necessary for the following season, which it is of great advantage to have provided, brought upon the ground, set up conveniently in stacks, and sharpened, when there is leisure in the winter months. The points of the old ones may also be put in order at the same time, and nothing be thus left to interrupt the business of poling at the proper season. The best poles, which are those of ash, chestnut and willow, of the length of from eighteen to twenty-four feet, will seldom last longer than six or seven years; and those of an inferior kind, as from beech, maple, oak, &c. not nearly so long. The bark is shaved off all the sorts except those of the ash kind, (in which it separates of its own accord in the second year,) in order to prevent their being destroyed by worms lodging in them.

After the poles have been stripped and stacked up, the bind should be cleared away, which, in some districts, is done by tying it up into bays, or small bundles, when perfectly dry, and putting it in stacks, sheds or other convenient places, for the purpose of fuel in ovens, &c. This work is performed at the rate of about six pence the hundred. In others it is burnt upon the ground; and, in some, the labourers are permitted to take it home for their own use. But whatever method is adopted, it should invariably be removed, to prevent its interfering with the future digging of the plantation, which is the next operation to be performed.

This should be executed as early as possible in the autumn or winter months, in order that the land may have the full influence of the frosts. The work should be performed in a dry season, and be accomplished with as much expedition as possible, the most careful and trusty labourers being always employed. It is usually done at a fixed price for one hundred hills, as from two shillings to half a crown. The labourer makes use of a three-pronged fork, which in some places is termed a *spud*, for the purpose, each prong being about an inch and a half in breadth. It is of great consequence that this operation be executed in a very perfect manner, much of the success of the plantation depending upon it. If there should be any binds of an improper kind, they may be now removed, and others of the proper sorts put in their stead.

And though manure may sometimes be omitted in the second year where the soil is very rich, it should be carefully applied before the business of the winter digging commences in each succeeding one, in the proportion of about twelve full cart loads to the acre; fifteen loads of good fresh vegetable earth having been well blended and incorporated with it by frequent turning for ten or twelve months before. In putting this compost upon the land, small one horse carts with three wheels are sometimes recommended as the best adapted to the purpose. It should be laid in small heaps; and, in digging the plantation, be well blended and intermixed with the mould that surrounds the hills, at the distance of about a foot from them. The old stocks, when they begin to decline, as every tenth or twelfth year, or much longer in some cases, should be taken up, and another portion of ground fresh planted; or, what is better, a suitable proportion of the old plantation, and an equal portion of new, broken up and planted annually, or every other year, so as to preserve a regular succession, at an easy and gradual expense, as has been already observed.

There is scarcely any sort of crop that varies quantity of produce than that of hops,

affording, under different circumstances of soil and season, from two hundred to upwards of twenty hundred weight on the acre. On medium soils, in tolerably favourable years, it may be estimated at from six to eight or nine hundred weight, from ten to fourteen being considered as good crops. A produce of twenty hundred weight but rarely occurs, and is much too large for the planter in general to fix his expectations upon.

The whole of the expenses incurred in the cultivation of these crops, and the profits which they afford, are stated in the following manner by Mr. Kent, in his useful Hints to Gentlemen Farmers:

Expenses per Acre.

	l.	s.	d.
Medium price of an acre of land suitable for hops,	1	10	0
Digging the ground,	0	13	0
Dressing and pruning,	0	8	0
Poling,	0	15	0
Three hoeings,	0	9	0
Once moulding,	0	3	6
Tying the binds to the poles,	0	12	0
Stripping the binds off the poles,	0	3	0
Stacking the poles,	0	4	0
Sharpening the poles,	0	10	10
Manuring,	2	0	0
Picking, drying, and duty, at 1l. 10s. per hundred, the crop being estimated at 12 cwt. the acre,	18	0	0
Bagging, and occasional expense of bags, about	0	16	0
Ash poles, estimated at 30,250 to the acre, and supposed to last eight years, medium price 18s a hundred at the stub—eighth part of which is nearly	3	13	0
Carriage of ditto, estimated at	1	5	0
	1.31	2	4

Produce.

Supposing 12 hundred per acre, and that the medium price is 4l. (\$197 6)			
the hundred, the amount will be	48	0	0
And the expenses deducted out of the produce, will leave a medium profit of	1.16	17	8

The expense of forming new hop plantations is very considerable. In Suffolk, it is estimated at from seventy-five pounds to one hundred, when every thing that is requisite is included; the annual charges being nearly the same as those which have been just stated.

In the county of Kent, where the practice of letting out the culture of crops of this sort to labourers who are experienced in the business, in some measure prevails, they are said not only to find a saving of expense, but to be so much relieved, in respect to the trouble of the different operations, as to consider it the most advisable mode. The account is stated in this way:

	l.	s.	d.
Undertaker's charge, he paying and finding labourers for the different operations,	3	10	0
Picking, drying, and duty,	13	0	0
Rent of land,	1	0	0
Poles,	6	0	0
Manure,	2	10	0
Tythe,	0	10	0
Bagging cloth,	2	0	0
	1.28	10	0

In these cases, where summer digging is omitted, and recourse is had to the use of the nidget, the expense will be a few shillings more, as is shown in the first estimate; the difference in favour of this practice, from that where the planter procures

and pays the workmen, being about one pound the acre.

The weather most favourable to crops of this sort, in the different stages of their growth, is that which is warm without much rain, and where south or south westerly winds prevail; as the hop is a plant which never succeeds well in such seasons as are wet, or when either easterly or northerly winds continue for any great length of time during the summer months. Hot gleams of sunshine after rain, or after foggy mornings, in the latter summer months, also prove highly detrimental to these crops. High winds towards the approach of the picking season, likewise produce considerable mischief, by bruising and otherwise injuring the hops. When unfavourable weather takes place, about the period in which the plants are in blossom, it is seldom that the produce is good or abundant, as many of the burs generally suffer in such a manner as to prevent their forming perfect hops.

In most cases, the very forward binds suffer more from all the different accidents to which hop crops are exposed, than those that are later and of a less vigorous growth, it may, on this account, therefore, sometimes be advisable to remove all the very forward binds.

FOOT ROT IN SHEEP.

(From the New England Farmer.)

MR. FESSENDEN—The following remarks on a disease which has lately appeared among the sheep of this country, are translated from a letter I received this morning from an intelligent correspondent at Leipzig. I think they may be of service to many of our wool growers, and therefore lose no time in offering them for a place in your valuable journal.

Respectfully, your obedient servant,

Boston, Feb. 7, 1827.

THO'S SEARLE.

"The foot rot is a complaint which has ceased to create the least uneasiness in this country, doubtless because means have been discovered to cure it readily and without expense.

"It is true that when neglected and allowed to spread itself, the cure may become difficult, and some sheep from loss of appetite occasioned by its long continuance, may not recover. I feel certain, however, that not a single sheep is lost in all Saxony, from this cause, as we have learned to remove the complaint immediately, as soon as it shows itself in a flock. In order to become fully acquainted not only with the symptoms of this disorder, but also with the means of cure, I some time since insulated a small flock, suffering it to spread itself more or less in different sheep, when it appeared that the longer the complaint had been in fixing itself in the system, the more difficult it was to cure; for while the least infected were thoroughly restored in a fortnight, I found that from six to eight weeks were required to cure the cases of longest standing. The most effectual method of cure is the following: Cut away with a sharp surgeon's knife, not only the superfluous hoof, but also all the diseased flesh under it. This may be distinguished from the healthy flesh by its greyish colour. Being well satisfied that nothing unsound remains in the foot, I then apply with a brush to the fresh wound some caustic liquor, and immediately place the patient in a separate clean stable.

"It is surprising to see animals thus treated, who were yesterday hobbling about on their knees, spring up to day and run about with the flock.

"It is necessary, however, to examine the convalescent daily, and repeat the liquid application, and if any excessive heat is discovered in a foot, it proves that the first operation has not succeeded, and a second cutting must take place without delay.

"The caustic remedies which I have found most

effectual, are diluted oil of vitriol and aqua cœrulea. The latter in the state in which it is found at the apothecaries without any addition. The oil of vitriol I mix with three times its quantity of water, or for cases of not long standing, with something more.

"I have been the more particular in detailing this mode of cure, because it seems probable you may do a service to the owners of sheep by communicating it to them. There are several pamphlets to be had here describing the symptoms and cure of this complaint, which I will purchase and forward you by the earliest opportunity. They contain, however, many things which are of little use to the practical man.

"The foot rot, at its first appearance in Germany, occasioned great uneasiness and alarm, and will doubtless have had the same effect in your country. I am, however, fully convinced that after a few years, and when your farmers have discovered that this scare-crow is harmless, notwithstanding its frightful appearance, they will treat it with the same indifference as ours do now."

PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE.

Annual Meeting, Jan. 16, 1827.—Dr. Mease, Vice-president, in the chair. The following officers were unanimously re-elected:

President.—Richard Peters.

Vice-Presidents.

William Tilghman, Nicholas Biddle,
James Mease, I. C. Jones.

Secretary and Librarian.—W. S. Warder.

Treasurer.—W. M. Walmsley.

Corresponding Committee.

Richard Peters, James Mease,
William Tilghman, John Vaughan,
Z. Collins.

Curators.

Reuben Haines, Stephen Duncan,
R. Vaux, Jer. Warder,
John H. Powel.

The following communications were read:—

1. On the importance of the manufacture of parmesan cheese to the United States, by Dr. Mease, with details of the process, from different authorities.

2. A letter to the chairman, from Benjamin Harrison, of Berkley, Charles city co., Virginia, relating additional facts of the efficacy of a drench of cedar-berries in curing the murrain in cattle. An account of this remedy, by Mr. H. is contained in the 5th vol. of *Memoirs* of the society.

3. By Mr. Philips, on the culture of rape, and its use as a winter food for cattle.

4. On the extraordinary excellence of Southdown mutton, determined by a recent trial of the saddle of a wether, imported in the year 1824, and subjected to the ordinary keep of a Pennsylvania farm, without grain.

5. By Mr. Powel, on breeding cattle and sheep—on the adaptation of different breeds to the various purposes, climates and soils of the United States.

6. The committee appointed to examine the sheep offered for the premium proposed at the last annual meeting, viz: "A silver cup, value \$50, for the best specimen of long or combing wool, reference being had to the form, properties, and characteristics of the animal, affording most flesh and tallow with least offal," reported in favour of Mr. Powel's "thorough bred Dishley sheep, recently imported by him from England."

Mr. Powel having exhibited one of his imported heifers of the improved Durham short horn breed, the committee added, "she possessed in a high degree all the fine points for which that valuable and

beautiful breed of cattle is celebrated. Notwithstanding she had been kept, thus far through the winter, without grain, she was in high condition; the best evidence that could be offered of her disposition to fatten on simple food." *Committee*—Aaron Clements, Michael Newbold, William Phillips.

7. Mr. Powel adduced evidence of the dairy properties of certain families of the improved short horned breed, among which were recent letters from Dr. Elmer, of New Jersey, and Mr. Carpenter, of Lancaster county.

COMPARISON OF SEVERAL EXTRAORDINARY OXEN.

SOVEREIGN.

Live weight, 3086 lbs.; height, 5 feet 9 inches; length, 9 ft. 2 inches; girth, 10 ft. 3 in.; rough tallow, 295 lbs.

SOVEREIGN'S MATE.

Live weight, 2800 lbs.; height, 5 feet 10 inches; length, 9 ft.; girth, 9 ft. 6 in.; rough tallow 307 lbs.

COLUMBUS.

Live weight, 2962 lbs.; height, 5 feet 9 inches; length, 9 ft. 1 in.; rough tallow, 218 lbs.

DELAWARE OX.

Live weight, 2688 lbs.; rough tallow, 278½ lbs.

BRIGHTON OX.

Live weight, 2798 lbs.

DUNHAM OX.

Live weight, 2744 lbs.

Sovereign and his Mate, were raised in the state of New York; fed by Mr. Fink, of Orange county, where they obtained a premium from the agricultural society. Sold to Thomas Gibbons, butcher, of the city of New York. The Mate not weighed, but supposed to overrun the estimate.

Columbus, and Delaware Ox, both slaughtered in Baltimore—published in the *American Farmer*, vol. 1, page 3.

Brighton Ox, exhibited in 1819, obtained the premium from the Massachusetts Agricultural Society, being a few pounds heavier than any before exhibited at Brighton.

Dunham Ox.—This celebrated English ox was out of a Highland cow, which weighed only 346 lbs. when slaughtered, and was probably the most perfect animal, having less bone in proportion to its size.

ON THE PLANTATION OF FOREST TREES.

Roxbury, Oct. 21, 1818.

GEO. W. JEFFREYS, Esq.

Sir.—Mr. Quincy, a few minutes since, put into my hands, your letter of the 6th of October, and although it will require some time to answer, in any manner satisfactory to myself, the questions you propose, yet I would lose no time in acknowledging the receipt of your very polite communication.—The very favourable opinion which you have been pleased to express of my remarks on forest trees, demands of me a respectful acknowledgement.

I have seen, with great regret, the native forests of our state demolished with a heedless and extravagant profusion, utterly disregarding of the inevitable consequences, a scarcity of both fuel and timber, and without a due reflection, or even knowledge, of the laborious steps by which our successors will be compelled to supply them. It is like the thoughtless waste of the spendthrift, who lives upon his capital, without recollecting that its income must inevitably diminish, and finally fail. Ill health in the middle of my life obliged me to visit Europe.

I was there astonished and delighted with the effects which necessity, taste, and a prudent fore-

sight had produced in the improvement of their forests. It was mortifying to me, with strong national feelings, to see fairer and finer trees, of species peculiar *originally* to our country, and unknown in Europe, (till the discovery of this country,) in the cultivated plantations of Great Britain. At the same time with us, I saw the finest trees selected either for fuel or other inferior purposes, and the quality of our forests daily diminishing.

I was extremely struck with another circumstance, that the number and value of trees, merely planted out as ornamental to an estate, were so great, as to afford a very important resource both for fuel and timber. A border of trees around an estate of 500 or 1000 acres, not more than 20 or 30 feet wide, furnishes a great supply of fuel and timber, merely from the occasional thinning, which the growth of the trees renders indispensable. I do not place to the account, though it is worthy of consideration, the effects on the landscape of a country, nor the shelter afforded to your crops. I know that the opinion is that they are unfavourable to culture; that their shade is exceedingly injurious. This is true to the extent of a rod or two, but the rest of the land is exceedingly benefitted, and you are enabled to sow earlier, and your crops are sheltered from early frosts in autumn and late ones in spring. I shall do myself the honour of answering your questions in the best manner in my power, at an early day. Nothing would give me more pleasure than to contribute, in a very small degree, to the improvement of the agriculture of our country, and I know of no point in which it is in New England so deficient as in the management of its woods. When wood shall come to be sold by the pound, as in some parts of France, then our nation will feel the necessity of attending to it, and of employing agents, as she has done, to inquire in foreign countries, what may be done for its preservation and increase. How much better to take measures of previous precaution to prevent its destruction?

I have the honour to be,

Very respectfully,
Your humble serv't,

J. LOWELL.

FOR THE AMERICAN FARMER.

INDIAN CORN.

Remarks on Mr. Seabrook's Tasks, Nos. 1 and 2.

(*American Farmer*, vol. 7, page 35.)

To have come to a just comparison of the relative productiveness of each part of the ear of corn, there should have been three tasks, as follows:

No. 1.	No. 2.	No. 3.
POINT.	MIDDLE.	BUT-END.
MIDDLE.	BUT-END.	POINT.
BUT-END.	POINT.	MIDDLE.

The point, middle, and but-end would then alternately have occupied an outside, to receive the benefit of air; so important to a correct estimate. Mr. Seabrook has continued the middle of the ear in the centre of each task, hence it has been excluded from its equal share of atmosphere. I imagine the upper left hand corner of task No. 1, was in a more favourable situation to receive the food for plants, than the lower right hand corner of task No. 2; or why did not each task produce the same quantity?

Was not the adjacent land better in that direction, or did the evening or morning breezes come from thence?

Perhaps Mr. Seabrook's last experiments (vol. 8, p. 298,) have placed the point of the ear in centre of his ground, and the but-end in the n fortunate situation. Experiments of this!

be most correctly tested in the middle of a field, where all the parts are equally secluded from an undue proportion of the passing breezes. When Mr. Seabrook has looked over these marks, and adverted to the probable local advantages of each part of the ear, he may, perhaps, see why the result of his two experiments are at war with each other.

It may not be amiss, whilst on the subject of experiments, to state, that, like Mr. Mercer (vol. 8, p. 323,) I have uniformly, for the last four years, planted no corn but such as I had carefully gathered (in baskets,) in the field, where two or more ears were on the same stalk; *I take none but the top ear.* I was led to this course by seeing a field many years since. It was so prolific (although I then lived in town,) that I inquired the cause, and was informed that such was the practice of its owner. It is well to remark that the top ear fills first, (I presume upon the same principle that buds on the tops of twigs first burst,) whether this circumstance conduces to bring it to earlier maturity, I pretend not to say. Last year some of my seed corn was planted by two of my neighbours. They report, unhesitatingly, that it is two weeks earlier, and more productive, than their favourite seed. It certainly shoots most abundantly; but the number of ears is in some measure regulated by the season: if it be very dry, the top ear may exhaust all that the stalk can afford; and if a wet season, two or three good ears are filled.

A SUBSCRIBER.

SEED OF THE FINE HAVANA SMOKING TOBACCO.

J. S. SKINNER, Esq.

Havana, Dec. 30, 1826.

Sir,—Having endeavoured early this summer to obtain a small quantity of tobacco seed for the purpose of sending it to you, I had the good fortune to get some of the very best kind that we have in our country.

Before I conclude my letter, I cannot but point out an idea concerning the tobacco leaf which is directly contradictory to the general belief of your countrymen. The yellow leaf might be considered as the handsomest, but it is by no means the best. The colour of the plant when dry, depends with us on accidents out of our control. The circumstances which our planters and manufacturers universally consider as evident proofs of its goodness, are the lightness, thinness and flavour of the leaf, instead of the colour. Then, although the seed should not produce yellow, but brown tobacco, you may believe it to be of the choicest kind we have.

I remain, sir, your friend and servant,
SILVESTRE, ATEN.

From the ...
... ..

our French clove ...
experiment,) with my ...
ar. It yielded fine ...
; and last spring, when ...
ake its appearance, the ...
ches above the ground. On ...
egan to soil it, daily cutting ...
three horses in my stable, and with ...
rom other grass ... continue ...
his da ...
group ...
on bu ...
whole ...
mowed ...

HOMAS ...

HORTICULTURE.

HORTICULTURAL ITEMS,

From Loudon's Gardeners' Magazine for 1826.

(Selected for the American Farmer.)

M. Pronville, of Versailles, finds that certain beautiful varieties of the rose lose their improved colours and return to their primitive state, when kept on their own roots. He, therefore, grafts them on stocks of wild rose; which, besides placing the flowers at an agreeable height from the ground, retains the variety in perfection.—*Trans. Lon. Hort. Soc. vol. 5.*

[The French wild rose grows to the height of six to twelve feet; and the finer varieties, budded at different heights, exhibit a diversified and beautiful appearance.]

Two gooseberry bushes are described in the Horticultural Transactions; the branches of one, at the seat of the late Sir Joseph Banks, extend 12 yards in circumference, and produce several pecks of fruit annually. It is manured with soap-suds and the drainings from the dung hill. Another is trained to a building; measures fifty-three feet from one extremity to the other, and produces annually from four to five pecks of fruit.—*Gard. Mag. April, 1826.*

[Our summers are too warm to cultivate the gooseberry to high perfection; besides, we are sorely afflicted with the mildew, which often covers the fruit when half and two-thirds grown. My gooseberries have not been free from this malady until last summer. In the autumn preceding, they were manured with stable dung, and during winter urine was poured about their roots. Those thus dressed were free from mildew.]

Ericas and Palms. Loudon gives a list of about 350 varieties of Heaths, in the heath-house of Professor Dunbar, near Edinburgh, and 120 varieties of Palm, cultivated by the Messrs. Lodridges, nurserymen. The latter sold three Palms at 500 guineas each, for the Oriental Conservatory.

Entomology. Kirby and Spence have published the 3d and 4th vols. of their "Introduction to Entomology, or Natural History of Insects."

A Horticultural Society was established at Berlin in 1822, and in 1824 they published their first volume of transactions, containing sixty articles, on a variety of subjects. Among these are three or four on the propriety of shortening the tap roots of fruit trees, and the opinion of the committee of the society upon these treatises. The committee, after a good deal of discussion, came to the conclusion, "that shortening the tap-root is a necessary evil, which should only be allowed under certain circumstances; that, therefore, it is absolutely improper with young plants that are transplanted to the spot where they are finally to remain; with some others, however, it is necessary, as a preparation for their future transplantation; and in that case gardeners should proceed with more care than is generally employed."

[Tap-roots are shortened to induce the production of lateral fibres; and is salutary when applied to trees which have large tap-roots. But in this case it ought to be done the year previous to their being transplanted. The object is to furnish, in the new fibrous roots, a substitute for the tap-root, which is necessarily diminished in the operation of transplanting. This tends to secure the life of the plant. The precaution is important with most forest trees, particularly those to be taken from the forest, whose system of roots is more defective, and more likely to be impaired by taking up, than those which are cultivated in a nursery.]

We observe in the Horticultural and Horticultural societies are established in every part of Europe ... Agriculture Society of Calcutta, in 1826 ...

Ladak, near the sources of the Ganges and Indus, upon the Himmaleh mountains, of the wild pear and apple, apricot, melon, marsh onion, buckwheat, lucerne, &c.]

Packing and preserving seeds.—Mr. Curator Anderson, of the Chelsea botanic garden, says, he received about a year ago, from the East Indies, 24 seeds, or nuts, of corypha taliera; twelve of them were carefully wrapped up in paper, not one of which germinated; and twelve of them were bedded in powdered charcoal, every one of which grew freely. Loudon says sugar will not preserve the germinating principle of seeds as has been often stated.

Charcoal, or carbon, is daily developing new properties subservient to the benefit of man. It has become indispensable to most of the arts; it arrests putrefaction in vegetable and animal matter; it purifies air and water; it constitutes our fuel, and a material food of plants; and it preserves the germinating principle in seeds in their passage through tropical climates.

Large Strawberries.—The skill of the horticulturist has been successfully exerted in Great Britain, to improve the quality and size of fruit, by new varieties, both by seed and by crossing. This remark applies particularly to the gooseberry and strawberry. Of the former, British nurserymen advertise some hundreds of varieties. Of the latter, we find two new varieties advertised in the Gardener's Magazine for April, 1826, the size of which is calculated to astonish the American reader. *Bishop's Orange* is represented to be *four inches and upwards in circumference.* This belongs to the scarlet class. *Wilmot's Superb* is from six to eight inches in circumference.

I should very much like to cultivate Wilmot's Superb strawberry, and I entertain the hope that I shall be able to gratify my wish. Yet I doubt its intrinsic merits. Its size and exterior beauty, like the gaudy dress of the beau and belle, excite a suspicion, that they merely serve to cover a weak and vapid pulp. Knight, the veteran of horticulture, considers the medium sized fruit as most profitable to the grower, as well as to the buyer. The Down-ton pippin, a small apple produced by him by crossing, is considered the best apple in England, for cider and the dessert, since the golden pippin has deteriorated. The diminutive wild crab of Virginia, and the small apples least esteemed for the table, afford a vinous liquor far surpassing that made from our largest and handsomest apples. The best wines, too, I am informed, are the production of grapes little esteemed for their beauty or their flavour. The principle of flavour is dissipated in the process of fermentation, and is best imparted to wine or cider, by infusing the ripe fruit in the fermented vinous product. Of our pears, the diminutive seikle and spice, surpass in richness the overgrown varieties; and of the strawberries, the common one of our northern meadows, is not excelled in my opinion, by any variety of our gardens. The specific juices seem to be more concentrated in medium sized than in large fruit. Nature appears in this respect, as in the one alluded to by Colonel Shepherd in regard to the fleece of the Merino, to have made up in quality what she has stinted in quantity. And yet after all ...

... arrived from London. He has brought ... 100 exotics, selected from the garden ... Joseph Banks and others. From his well ... genius in Botany, it may be expected that ... selections are rare and valuable. He has secured a spot near Black Brook, in Goffstown, for the site of his garden. We have no doubt that Agriculture and the state in general will be benefited by his nearness to the ...

RADISHES.

Abercrombie says, "to obtain the earliest spring radishes, sow on a hot-bed of dung or leaves some early dwarf short-tops in December, January, or the beginning of February. Having made a hot-bed 2 feet or 2½ feet high in dung, place on the frame; earth the bed at top six inches deep; sow on the surface, covering the seed with fine mould, about half an inch thick; and put on the glasses. When the plants have come up, admit air every day in mild or tolerably good weather, by tilting the upper end of the lights, or sometimes the front, one, two or three inches, that the radishes may not draw-up weak and long-shanked. If they have risen very thick, thin them, in young growth, moderately at first, to about one or two inches apart. Be careful to cover the glasses at night with garden mats or straw litter. Give gentle waterings about noon on sunny days. If the heat of the bed declines much, apply a moderate lining of warm dung, or stable litter, to the sides; which by gently renewing the heat, will forward the radishes for drawing in February and March. Remember, as they advance in growth, to give more copious admissions of air daily, either by tilting the lights in front several inches, or, in fine mild days, by drawing the glasses mostly off; but be careful to draw them on again in proper time. Small turnip radishes, of the white and red kinds, may be forced in the same manner. For raising early radishes on ground not accommodated with frames, a hot-bed, made in February, may be arched over with hoop-bends, or pliant rods, which should be covered with mats constantly at night; and during the day, in very cold weather. In moderate days, turn up the mats at the warmest side; and on a fine mild day, take them wholly off. "Any sort of radish seed may be sown occasionally for salad herbs, to be taken while in the seed-leaves, to mix with cresses and mustard. Sow about once a week in spring, summer, or any season when radish salad is required, managing it as other small salad herbs." [Loudon's Enc. of Gard.

LADIES' DEPARTMENT.

THE ART OF HAPPINESS.

Arachne and Melissa are two friends. They are both of them women in years, and alike in birth, fortune, education, and accomplishments. They were originally alike in temper too; but, by different management, are grown the reverse of each other. Arachne has accustomed herself to look only on the dark side of every object. If a new poem or play makes its appearance, with a thousand brilliancies, and but one or two blemishes, she slightly skims over the passages that should give her pleasure, and dwells upon those only that fill her with dislike. If you shew her a very excellent portrait, she looks at some part of the drapery which has been neglected, or to a hand or finger which has been left unfinished. Her garden is a very beautiful one, and kept with great neatness and elegance; but if you take a walk with her in it, she talks to you of nothing but blights and storms, of snails and caterpillars, and how impossible it is to keep it from the litter of falling leaves and worm-casts. If you sit down in one of her temples, to enjoy a delightful prospect, she observes to you, that there is too much wood, or too little water; that the day is too sunny, or too gloomy; that it is sultry, or windy; and finishes with a long harangue upon the wretchedness of our climate. When you return with her to the company, in hope of a little cheerful conversation, she casts a gloom over all, by giving you the history of her own bad health, or of some melancholy accident that has befallen one of her daughter's children. Thus she insensibly sinks her own spirits, and the spirits of all around her; and at last,

discovers, she knows not why, that her friends are grave.

Melissa is the reverse of all this. By constantly habituating herself to look only on the bright side of objects; she preserves a perpetual cheerfulness in herself; which, by a kind of happy contagion, she communicates to all about her. If any misfortune has befallen her, she considers it might have been worse, and is thankful to Providence for an escape. She rejoices in solitude, as it gives her an opportunity of knowing herself; and in society, because she can communicate the happiness she enjoys. She opposes every man's virtue to his failings, and can find out something to cherish and applaud in the very worst of her acquaintance. She opens every book with a desire to be entertained or instructed, and therefore, seldom misses what she looks for.—Walk with her, though it be on a heath or common, and she will discover numberless beauties, unobserved before, in the hills, the dales, the brooms, the brakes, and the variegated flowers of weeds and poppies. She enjoys every change of weather and of season, as bringing with it something of health or convenience. In conversation, it is a rule with her, never to start a subject that leads to any thing gloomy or disagreeable. You therefore never hear her repeating her own grievances, or those of her neighbours; or, (what is worst of all) their faults and imperfections. If any thing of the latter kind be mentioned in her hearing, she has the address to turn it into entertainment, by changing the most odious railing into pleasant raillery. Thus Melissa, like the bee, gathers honey from every weed; while Arachne, like the spider, sucks poison from the fairest flowers. The consequence is, that, of two tempers once very nearly allied, the one is ever sour and dissatisfied, the other always gay and cheerful; the one spreads a universal gloom, the other a continual sunshine.

There is nothing more worthy of our attention, than this art of happiness. In conversation, as well as life, happiness very often depends upon the slightest incidents. The taking notice of the badness of the weather, a north-east wind, the approach of winter, or any trifling circumstance of the disagreeable kind, shall insensibly rob a whole company of its good humour, and fling every member of it into the vapours. If, therefore, we would be happy in ourselves, and are desirous of communicating that happiness to all about us, these minutiae of conversation ought carefully to be attended to. The brightness of the sky, the lengthening of the day, the increasing verdure of the spring, the arrival of any little piece of good news, or whatever carries with it the most distant glimpse of joy, shall frequently be the parent of a social and happy conversation. Good manners exact from us this regard to our company. The clown may repine at the sunshine which ripens the harvest, because his turnips are dried up by it; but the man of refinement will extract pleasure from the thunder storm to which he is exposed, by remarking on the plenty and refreshment which may be expected from the succeeding shower.

Thus does politeness, as well as good sense direct us to look at every object on the bright side; and by thus acting, we cherish and improve both. By this practice it is that Melissa is become the wisest and best bred woman living; and by this practice, may every person arrive at that agreeableness of temper, of which the natural and never failing fruit is happiness. [Harris.

A NICE WAY OF STEWING MOLASSES INTO EXCELLENT CANDY.

Take a sheet of white paper, cut it round, then crimp the edge all round; by this operation it will acquire the form of a round vessel;—when the vessel's shape is formed, the crimping will be on the outside. Fill it half full of molasses, set it on red-

hot embers or live coals, (there is no danger of the paper burning;) after the molasses has stewed sufficiently, take it off to cool, when it becomes highly flavoured candy.

SPORTING OLIO.

EXTRAORDINARY RIDING.

In October, 1754, Lord Powerscourt having laid a wager with the Duke of Orleans, that he would ride his own horses from Fontainebleau to Paris, a distance of 42 English miles, in two hours, for 1000 louis d'ors, the king's guards cleared the way, which was lined with thousands of Parisians. He was to mount only three horses, but he performed the task with two, in one hour, thirty-seven minutes, and twenty-two seconds. The horses through whose exertions the wager was won, were both killed by the severity of the feat they had achieved.

(From the Annals of Sporting, Oct. 1826.)

Singular Circumstance.—As the two celebrated race horses, Trinculo and Comedian, were out at exercise on Abingdon race-course, they were passed by another horse at full speed. Both horses felt indignant at being left in the rear, and instantly bolted in pursuit of him, throwing their riders, and leaping, hedge, ditch, and, in short, every obstacle that came in their way. Trinculo, who was in the rear, seized on Comedian, who escaped with difficulty, by falling into the Thames, at a place where the water is full twenty feet deep. Trinculo pursued him into the water, but luckily both horses were got ashore, uninjured, by some countrymen who were passing at the time.

CURE FOR DISTEMPER IN DOGS.

Give a dog 8 months old, 4 grains turbeth mineral; to be kept from water 24 hours—then 4 grains crocus metallorum.

MISCELLANEOUS.

LITERARY.—*The Philadelphia Album, and Ladies' Weekly Gazette*; of which eight quarto pages are published weekly, making an annual volume equal to eight hundred and thirty-two octavo pages, printed on fine paper, and embellished with splendid engravings.

Its design is to furnish a WEEKLY REPOSITORY, or abstract of the Fine Arts, Botany, History, Travels, Reviews, Moral Essays, Sketches, Tales, Familiar Letters, Poetry, Receipts, &c. &c with a Weekly Summary of the earliest Foreign and Domestic News. The Album is peculiarly devoted to such subjects as are most interesting and useful to our Fair Countrywomen, embracing a great variety of the elegancies of polite literature, conversation, dress, beauty, manners, &c. with biographical sketches of those who have been distinguished for their talents, piety, and other eminent virtues.

In addition to its usual variety, early in January will commence the publication of nearly sixty Original Tales, and shortly thereafter, a handsome collection of original Essays and Poems, all of which have been written in competition for the literary prizes, (six gold medals, of the value of \$210) offered by the proprietors of this work. No pains or expense is spared in making it a beautiful as well as a useful and interesting publication; and the unprecedented reception which it has already met with from the public, warrants the printing of a weekly edition of upwards of 3000 copies.

"The Album," says the Rochester New York Daily Advertiser of Dec. 4th, "has been highly commended by the editors of public journals in almost

spots of grease as may be on the coat, particularly those on the cuffs, collar, the pocket-holes, and under the arms, &c. This done, if you have time, dry it by the fire or in the sun; prepare a pennyworth of bullock's gall, and mix with it half a pint of stale urine; add to this, if required, a little boiling water, to make the quantity of alkaline liquor sufficient for your purpose, such as chamber ley, potash liquor, or bullock's gall. You must take care not to weaken this too much with water; but instead of it, add as much as you like of the chamber ley. Dip your hard brush in this liquor, and brushing the spotted places on your coat, you will find it produce a white froth, like soap lather. After this you must dip the coat in a bucket of cold water; spring water is best, to wash off the filth and bad smell. Then take a walking stick, and put through the two arm holes, and putting a string round the middle of the stick, hang the coat to dry. When it is nearly dry, take your brush and lay the nap the right way of the cloth, and when quite dry pour a small drop of oil of olives in your hand, and pass it over the brush, with which strike your coat; and, if too much oil is not used, it will give it the appearance of new.

FOR SCOURING GREY, DRAB COLOURS, FAWNS, MAROONS, AND ALL OTHER COLOURED WOOLLENS, SUCH AS LADIES' PELISSES, MANTLES, COATS, &c.

Supposing the garment to be a coat, take some of the best yellow soap, and cutting it into thin slices, pour upon it a sufficient quantity of water just to moisten it. Then roll it into a ball, and rub all the greasy and dirty spots of the coat with it.

Let it dry a little, and then taking warm water, dip your brush in it, and stroke off the soap: if not quite clean, proceed as before; and use your water a little hotter; rinse, at least three times, in two or three buckets or pans of water; the first of these should be blood warm, or even hotter. Hang to dry, as before directed.

EDITORIAL CORRESPONDENCE.

TAPIA.

Answer to inquiries as to the manner of building and attaching Chimnies.

Washington, Feb 15, 1827.

J. S. SKINNER, Esq.

Sir—Your inquiry as to the manner in which the chimnies are to be attached to the houses built of tapia, shall be answered. As the tapia does not stand the fire very well, the chimnies ought to be made of brick, or clay. They may be built at the same time the house is going up, or after the house is built; and they may be built within or without the house, at the option of the builder. If in cottages or negro quarters of one story, a hearth of clay or brick, and a back of the same materials, with simply a chimney of sticks and mud, or clay, mixed with common straw or dried pine leaves, formed like an inverted funnel, resting on the beams, will answer very well. The chimney being made of brick, and independent of the wall, will settle equally, and be not subjected to those cracks which the unequal settling of the wall and chimney sometimes produce.

With sentiments of esteem, I am,

Dear sir, yours very respectfully,
ALEX. MACOMB.

GRAPES.

MR. SKINNER,

Will your correspondent in Newbern (October 1, 1826,) please to say, what *Grape* was it, of which a single vine made 60 gallons wine; how cultivated; what the age of the vine; what the quality of the wine, &c.—and he will much oblige

One of your Subscribers in Alabama.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 23, 1827.

THE DIRECT TAX ON THE FARMERS OF THE STATE.—Were the title of this paper the *Maryland Farmer*, and its objects correspondent therewith, we should have much more to say on the peculiar affairs of the state; for there is, perhaps, not one, in its policy and institutions—in the want of good legislation, and in legislation positively bad, as regards its agricultural condition and wants,—that affords a more fertile field for animadversion.

Depressed, as is the farming interest; despoiled by a partial system of taxation; supplanted in one of its great staples (tobacco,) by competitors even beyond the mountains; and failing in another (wheat) by a succession of calamitous incidents, sometimes by the fly, sometimes by the drought, and always by low prices—added to all this, we are now again told that the direct taxes cannot be repealed: nay, that the ordinary sources of the state's revenue falls short of its necessary expenses, in the sum of \$13,146:33. See the lucid report of the finance committee, presented to the House of Delegates by its able and assiduous chairman, Mr. J. G. Chapman.

On the subject of this tax, the Committee of Claims, anxious to relieve the people, are yet forced to adopt the following language:

"The depressed situation of the finances of the state forbids the recommendation of a repeal of the direct tax. The agricultural interest contributes largely to the support of the government, and at this time, when the people are burdened with debt, and our staple articles commanding but limited and inconsiderable prices, additional contributions to the treasury should be drawn from other sources than the channel of direct taxation. The state should be solicitous to derive her revenue from sources, which, while they are permanent and productive, are not burdensome to any part of the state, or oppressive to any portion of its citizens. It will readily be acknowledged, that the agricultural interest of our country has been for some years past, and still is so cramped, that its proceeds are inadequate to its maintenance and progress, and that no additional burdens can be borne. A revenue may be derived from other legitimate sources of taxation—and the committee recommend—

"1st. Duties on sales at auction.

"2d. A tax upon stocks, and such other personal property as escapes taxation under the existing laws. Inasmuch as the duties on auction sales are derived indirectly from the consumption of the whole state, it is proper that those duties should be paid into the common coffers of the treasury. A bill upon this subject will be submitted to the house."

Upon what principle of common sense or justice is it, that the owner of a single acre of land should be compelled to contribute to the expenses of the government, whilst he, who sells his lands and invests the amount in bonds, or United States, or many other stocks, receives at least six per cent interest, and pays not a cent towards defraying the necessary expenses of administering the government? Is it to be wondered at, that men of ordinary sagacity seek to escape from a calling which is made the stalking-horse for all others, and burrow in the town, or fly their state to employ their time and invest their capital free from taxation? Who would voluntarily play the part of the patient ass, and carry his burdens and browse on thistles; when he could frolic and gambol as the horse, that ranging in the midst of liberty and abundance, "mocketh at fear and is not affrighted?"

There is, however, one obvious and practicable reduction which might be made, without any detriment to the welfare, or the least danger to the li-

berties of the state; and that is, by reducing the number of delegates from each county at least one half!

This reduction would more than relieve the farmer from the direct tax; and who can say that two men of such capacity as ought to undertake the business of legislation, would not be fully adequate to the transaction of the business of any county in the state? Nay, more: let us look at the list of laws for the last forty years. Will any one say that such as have a local bearing on each county might not have been digested by any business man in a week? What sound reason can be given for taxing the people with four delegates from each county, seeing that in most of them population is stationary, if not retrograding? None. The argument of liability to corruption will not be advanced—for if forty may be corrupted, we may give up the ship; the whole mass must be rotten—besides, who will express the apprehension?—*boni soit qui mal y pense*. The delegation from each county ought to be reduced, and if the people of each county had to pay them, as in New England, they would soon have it so. We have no concern, and mean to have none, with politicians; we only suggest this to the people—the farmers of the state, as one obvious and safe, and ready means to rid themselves, at all events, from taxation. It is in behalf of the oppressed landed interest that we would raise our feeble, but conscientious voice.

JUDGE BUEL.

The Hon. Isaac Hill, Editor of the New Hampshire Patriot, in republishing from the New England Farmer some valuable agricultural observations in answer to the gentleman who sent the communication, and who appeared not, personally, to know Judge Buel; makes the following pertinent and just remarks as to the character and useful labours of that distinguished friend and promoter of the interests of the plough.

"Our respected correspondent is informed that Judge Buel was educated originally to the business of a printer—that he was editor and publisher of that valuable political paper, the Albany Argus, during and subsequent to the last war—that by his industry and perseverance in business, he obtained a handsome property, sold the newspaper establishment, and purchased the ground for a farm in the vicinity of Albany, about ten years ago—ground, which before he entered upon it, was deemed to be of little value for the purposes of a farm. On this ground Judge Buel has made such a farm as that he obtained several years ago, a premium of the Agricultural Society for the best and most profitably cultivated farm in that flourishing county. Judge B. labours with his own hands on his farm; and although commended for generous hospitality, and ready always to make any sacrifice in trying new experiments where there is a reasonable prospect of success, is said to be constantly increasing in wealth from the business of farming merely. A brother of the profession, and a co worker in the great cause of the country during a dark period of our history, we allude to this gentleman not without feelings of complacency and pride. He has been, and continues to be, honoured with a due share of confidence from his fellow citizens—he has been a member of the legislature, and is now, we believe, a Judge of one of the courts. His best fame, however, rests in his merit as a practical and scientific farmer: his essays on agricultural subjects, not less than his personal example, rank him among our public benefactors; and his name deserves to be placed on the same page with that of BENJAMIN FRANKLIN."

Hay, \$13 per ton; Rye Straw, \$14; Chop Rye, cwt. \$1.63; Oats, bush. 45 cts; Corn, in ears, bbl 62 1/2 cts; Cut Straw, bush. 4 cts.

MARKETING.—Butter, first qual. per lb. 37½ cts.; Beef, prime pieces, 8 cts.; Pork, 6½; Veal, 8 cts.; Mutton, 6½ cts.; Potatoes, bush. 75 cts.; Eggs, doz. 12¼ a 15 cts.; Geese, 75 cts.; Turkeys, \$1 a 1.25 cts.; Chickens, pair, 50 a 62½ cts.; Turnips, bush. 75 cts.

LIVE CATTLE—\$4.50 to \$5.50.

BALTIMORE INFIRMARY.

The Committee to whom is entrusted the superintendence of the Infirmary of the University in this city, anxious that the advantages it affords may be more generally known, take this mode of communicating to the public, that this institution has latterly undergone a thorough reform; its advantages and conveniences greatly enlarged and improved; and being placed in the most efficient condition, remains open for the reception of patients.

The house is under the direction of a committee of the Trustees, and who are specially charged with the superintendence and government of its concerns; they give their gratuitous attendance, in order that no circumstance may be omitted necessary to the comfort of the patients.

Patients of all descriptions, and of both sexes (except lunatics) can be accommodated in a manner suitable to their condition and circumstances; there are also distinct apartments provided for coloured persons.

The rooms are spacious and well arranged, with all proper furniture, &c. complete; so that the utmost satisfaction and comfort may be expected.

The nursing, attendance, and immediate charge of the house, is entrusted to, and performed by eight Sisters of Charity, whose skill, fidelity, care, and watchfulness are devoted to the sick, from motives of charity and benevolence; and whose merits and whose virtues cannot be sufficiently described or extolled.

Two of the medical professors give daily attendance, who regulate the treatment of the sick in the Medical and Surgical wards; and in cases of great interest, requiring full and deliberate consultations, the attending physician and surgeon have the Medical board of examiners of the Medical and Chirurgical Faculty of Maryland as the consulting physicians of the institution. The patients are thus afforded the opportunity of a full and deliberate investigation of their maladies, and the best means adopted for their relief. There are also two medical students who reside in the house, and are in readiness at all hours to give every attention that the patients may require.

The Committee are pledged, that nothing shall be neglected, calculated to insure comfort and attention to the sick: and when it is considered that the charge is so very moderate, and the asylum so admirably adapted to the purposes, they feel confident that the publick cannot fail to patronize an institution so truly useful, and so well calculated to extend such benefits to its inmates.

Six or eight medical students can be comfortably and permanently lodged and boarded in the institution on moderate terms, who will not only have the use of the library belonging to the institution, but also the benefit of witnessing the daily practice in the house.

The price of boarding, lodging, washing and medical attendance on the sick, is three dollars per week, and which includes any necessary surgical operation. Private apartments, including all that is mentioned above, may also be had at a very small additional charge.

Ladies and gentlemen are invited to visit and inspect this Institution. It is situated in Lombard-street, in a healthy and pleasant part of the city; and although it is retired, the access to it is easy and convenient.

SOLOMON ETTING,
Doct. JAMES STEWART,
Doct. GEO. ROBERTS,
Committee of the Trustees.

Feb. 23, 1827.

BLOODED STALLION.

A full bred Stallion, 8 years old, got by Col. Tayloe's "Topgallant," who was sired by the imported horse "Diomed," and out of a mare of the best blood of Virginia. He is a good size, blood bay, and what is remarkable in turf nags, a very superior saddle horse. He will be sold either for cash or on a credit; or, if desired, the use of him for the approaching season, would be let at a fair price to any gentleman who would take care of him. He can be seen at any time in Baltimore.

Persons disposed to purchase either the horse, or his season, must make early application.

Feb. 23, 1827. JESSE H. WILLIS, Baltimore.

JACK AND THREE JENNETS, OF FINE SIZE AND STOCK—FOR SALE.

Sir,—To enable you to answer any further inquiries which may be made, I have to inform you that my Jack is 4 feet 3 inches in height, with a good set of limbs; his colour black, with white belly and muzzle. He promises to be vigorous. He was let to only four mares last spring, which he served well. I have two fine colts by him, and would not part with him but that I have a full stock of mules, and shall not want more, before a young Jack which I have (sired by the one I now offer for sale,) will be fit for service.

J. S. SKINNER, Esq. JOHN TILGHMAN.

P. S. I will deliver my Jack and Jennets in Baltimore for \$625. Inquire of the Editor.
Feb. 23, 1827.

PRICES OF STOCKS.

(Reported for the American Farmer, by MERRYMAN & GITTINGS, Stock and Exchange Brokers.)

Baltimore, Feb. 23, 1827.

BANK STOCKS.		par value.	present price.
U. States' Bank Stock, per share, f. s.	\$100	118	
Bank of Maryland, do.	300	227 w	
Bank of Baltimore, do. (div. off.)	300	342 w	
Union Bank Maryland, do. do. w	75	75 w	
Mechanics' Bank,	w	9	9.50
Franklin Bank,	w	20	25.25
Commercial and Farmers' Bank, w	20	26.25	
Farmers' and Merchants' Bank, .	50	55.00	
City Bank,	w	15	2.80
Marine Bank,	w	25	27.25
Farmers' Bank of Maryland, .	50	53 w	
CITY STOCKS.			
Corporation 6 per cent. redeemable } after 1836,	100	111 w	
Do. 5 per cent. redeemable in 1832,	100	102 w	
Penitentiary 5 pr. cent. stock; (none } in market.)	100		
Museum, 8 per cent. (no demand.)			
Masonic Hall, 6 per cent.	100	par & int.	
Annuities, or Ground Rents, . . .	6 to 10	per cent.	
ROAD STOCKS.			
Reister's Town, . (div. off.) f. s.	20	10.25	
York, do. f. s.	20	7.25	
Frederick, do. f. s.	20	11.75	
Washington and Baltimore, . . .	50	31.50	
Baltimore Water Company Stock, per share, (div. off.)	50	92	
Union Manuf. Co. Stock, per share, w	50	14.50	
Gas Stock,	100	130	
Temascaltepec Mining Co's, per share,	600	800 f s	
Havre de Grace Turnpike 6 per cts. par & interest			
U. STATES' STOCK.			
Six per cent. 1813, (div. off.)	100	1024	
—, 1814, do. f. s.	100	103	
—, 1815, do. f. s.	100	104	
Three per cent. do. w	100	804	
Four and half per cent. do.	100	1024	
Five per cent. do.	100	107	

W., wanted—f. s., for sale, by Merryman & Gittings.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bb. l.	9 00	9 50		
BACON, and Hams, . . .	lb.	6	10	9	12
BEEF-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16½	20	22
Havana,	—	14	16		30
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent each number to No. 18.					
CANDLES, Mould, . . .	—	13	15	16	18
Dipt,	—	11	13		16
CHEESE,	—	8½	12	12	15
FEATHERS, Live, . . .	—	29	30	37	
FISH, Herrings, Sus.	bb. l.	2 37½			
Shad, trimmed,	—	5 50	6 00		
FLAXSEED,	bush	1 00	1 10		
FLOUR, Superfine, city,	bb. l.	5 25	5 37½		
Fine,	—	5 00			
Susquehanna, superfi.	—				none
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	55			
white	—	55			
Wheat, Family Flour,	—	1 10	1 20		
do. Lawler, & Red, new	—	1 00	1 05		
do. Red, Susque. . .	—	1 05	1 10		
Rye,	—	70	75		
Barley, Eastern . . .	—	1 10	1 20		
Do. country	—	90	1 00		
Clover Seed, Red . . .	bush	6 00	6 25		
Ruta Baga Seed, . . .	lb.	87		1 00	
Orchard Grass Seed, .	bush	3 50			
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed,	—	4 00		5 00	
Oats,	—	45		50	
Beans, White,	—	1 50		2 00	
HEMP, Russia, clean, .	ton	250	260		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb	18		25	
HOGS' LARD,	—	9	10	12	
LEAD, Pig	lb.	6½	6½		
Bar	—	7½	8		
LEATHER, Seal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	30	50		75
Havana, 1st qual. . .	—	30	32	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar,	bb. l.	1 50	1 62½		
Pitch,	—	1 75			
Turpentine, Soft, . .	—	2 50	2 75		
OIL, Whale, common, .	gal.	33	34	40	
Spermaceti, winter . .	—	70	75	88	
PORK, Baltimore Mess, .	bb. l.	11 50	12 00		
do. Prime,	—	9 00	9 50		
PLASTER, cargo price,	ton.	3 25			
ground,	bb. l.	1 60			
RICE, fresh,	lb.	3½	3½	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, . .	—	5½	8	10	12
WHISKEY, 1st proof, . .	gal.	34	36		50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—			32	50
SUGARS, Havana White,	c. lb.	13 00	13 50	14	15
do. Brown,	—	10 00	10 50		
Louisiana,	—	8 00	9 10	10	11
Loaf,	lb.	19	22		22
SPICES, Cloves,	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	15		25	
SALT, St. Ubes,	bush	48	50	75	
Liverpool ground . . .	—	54		75	
SHOT, Balt. all sizes, .	c. lb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Port, first quality, . .	gal.	1 65	1 85	2 50	
WOOL, Merino, full b'd	lb.	30	35		
do. crossed,	—	20		2½	wash' on
Common, Country, . .	—	18		22	sheep's
Skinnners' or Pulled, .	—	20		25	back & free from tags.

Printed every Friday, at \$5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOR, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

ON MANURES.

(From London's Encyclopædia of Gardening.)

Of the Specific Application of Fermentative, and Fossil or Saline Manures.

Grisenthwaite is the first to have generalized the fact of peculiar substances being found in plants, in addition to the common elements of oxygen, hydrogen, carbon and nitrogen; and though his examples, like most of Sir H. Davy's, are taken from agriculture, yet we deem the subject of more than sufficient importance to gardening, to warrant us in placing his theory before the reader.

"Elements of primary principles," he says, "admit of no alteration, but as regards magnitude and figure. Hence, when one substance, composed of certain elements, is designed to be transmuted into any other substance, as sugar, by fermentation, into alcohol, or acetic acid or manure into grain, it is obvious that the elements of the second must necessarily be contained in the first; for if they be not, the transmutation cannot take place. This will render it evident, that a knowledge of the elements or constituents of bodies, which are intended to be changed into each other by certain processes, should be previously possessed, in order that the processes may be conducted with a probability of success. We are therefore led to inquire into the nature of certain crops, and to consider whether their peculiar elements be provided for in the manure, as it is now prepared by agriculturists. If they be not, it is but reasonable to infer, that the failure of many crops may be referred to the deficiency of certain elements in the manure.

"If all crops were composed of the same elements this discrimination would not be needed; and upon such a supposition the practices of husbandry have been uniformly conducted, and are now conducted; with what disadvantage will, perhaps, appear in the sequel.

"To illustrate the preceding reasoning, the wheat crop may be selected with considerable advantage, as it is that which is not only the most important to the interests of mankind, but because the presence of particular substances in it are better known and more generally acknowledged. If we examine the straw of wheat we shall find it composed of what may be considered common vegetable matter, or matter composed of oxygen, hydrogen and carbon, with a small quantity of carbonate of lime; so also, if we examine the constituents of the grain, we shall find them distinguished into starch and gluten; and if we carry our researches still farther, we shall find that the elements of the starch are precisely the same with the elements of common vegetable matters; but the elements of the gluten will be found analogous to those of animals, or, in addition to oxygen, hydrogen and carbon, there will be found nitrogen. The production of this nitrogen, as has been already observed, cannot be effected by mere common vegetable matter; and, therefore, the manure employed in the production of the straw and starch, could not produce the gluten also. If the presence of gluten were accidental, or the value of the flour did not depend on it, then little care need be taken to provide for its formation; but as it is required to be constantly present, and the value of the flour does essentially depend on it, therefore, a provision ought to be made for it. In quantity it is not inconsiderable, but it composes nearly one-third part of the grain. That the operations of husbandry as regards wheat, should be conducted without any reference to this peculiar substance, is very remarkable. That the failure of crops has never been ascribed to its deficiency, is still more wonderful. What has been advanced

concerning manures in general, may afford some explanation of the cause of this neglect. The process of this vegetation, and the constituents of vegetables, are not known to the practical farmer, because they have been difficult to ascertain; and the nature of his manure is involved in the same obscurity. He supposes it to contain every thing needed for every crop.

"That the gluten of wheat flour may always be present, it is necessary that a quantity of animal substance should exist in the manure applied to the land where the wheat crop is intended to be raised. That a certain portion of such animal substance is applied, is proved from the fact of gluten being always found to exist in that grain; but it is highly probable that the quantity is not always sufficient; and if not sufficient, the crop will be defective, either in quality or quantity. If we pursue our investigations a step farther than we have done, we shall discover that phosphate of lime is as constant a constituent of wheat flour as gluten itself. Phosphate of lime, therefore, is as much needed for the production of a crop of wheat, as the substances which supply the starch and gluten. It is not a little remarkable, that this phosphate of lime is soluble in no known fluid, except through the medium of an animal substance, as gelatine, &c. and consequently the same animal substances which furnish the element of the gluten, will also furnish a medium for the phosphate of lime; which appears to be equally indispensable to the formation of a perfect grain of wheat. It not only furnishes a medium, but generally a quantity of the phosphate itself.

"The only substance now employed for the production of gluten, is the urine of live stock; the alvine excrementitious matter having been proved to contain little or no nitrogen; this urine is applied either by folding, or mixed with the farm-yard manure; in both of which situations, it is constantly forming ammonia, which is dissipated; so that a very inconsiderable part of the whole is retained to answer the purposes of vegetation. The practice adopted in Flanders of saving it has been already alluded to.

"When the utmost attention is paid to prevent the loss of any of the animal substances, accidentally present in farm yard manure, it still remains a question, whether there be a sufficiency for the purposes to which it is to be applied. That there is not always a sufficiency of some kinds of manure is obvious from the immense quantities of oil cake which are so employed. Oil cake, although a very excellent substance for such a purpose, can furnish little else than nourishment to the straw, and starch of the wheat crop. It cannot contribute to the formation of gluten; and gluten, as has been observed, composes one-third part of all that is valuable in the whole crop.

"Bones, and other animal substances, have been highly recommended for grass or pasture lands. To discover the injudiciousness of applying such substances to crops indiscriminately, it will be necessary to become acquainted with the fact, that there is no kind of grain except wheat, raised artificially for the purposes of man, or cattle, that contains any notable quantity of any substance analogous to that of animals. Hence, when bones, &c. are used on grass lands, or for the barley crop, &c. all the nitrogen, with so much hydrogen, and probably carbonic acid gas, as is sufficient to form a subcarbonate of ammonia, will be entirely lost. If bones be the animal matter employed, every one hundred pounds weight will yield about fifty pounds of solid gelatine, of which twenty pounds, at least, will be thus wasted, or two-fifths of all that is valuable in the bone. If, instead of being employed for grass, &c. they had been used for wheat, all this might probably have been saved. This is not mere opinion; its truth is obvious to every one conversant with the chemical nature of bones and grass.

"Phosphate of lime composes a part of the grain of wheat, and is supplied by animal substances. Bones furnish an abundance of it. That this constituent of the wheat crop, as well as several other constituents of different crops, should not be disregarded altogether, although they form very minute proportions of those crops, must appear reasonable to every one who knows, that, in their selections, there is exercised a constant discrimination. That wheat always takes up phosphate of lime is a proof scarcely needing further evidence, that it answers some useful, and perhaps indispensable purpose in the grain. It does not exist in the straw: and barley, oats, or clover, grown on the same land, at the same time with the wheat, take up no portion of it whatever. If there had not existed this constancy in the selection of particular substances; if phosphate of lime had sometimes been taken up by barley or clover, and sulphate of lime had been found in wheat, then we might have concluded that the whole was accidental, and being accidental, that they assisted in no way whatever the formation of other parts of the grain, nor contributed to promote the general economy of the vegetable. They who are unwilling to admit the performance of certain uses by these substances, must depart from a mode of reasoning which philosophy has long countenanced, and which we must hereafter employ, whenever we are anxious to explore the causes of physical effects.

"As little attention has hitherto been paid to these saline bodies, as they regard the process of vegetation, and much less as they respect the operations of husbandry, they are, for the sake of distinction, called *specific manures*; and the gluten of wheat a *specific vegetable matter*. Hereafter, when a more complete analysis of vegetables shall be made, it is probable that a nomenclature, founded on these specific substances, may at least classify, if not particularize, every kind of plant.

"If we turn our attention from the wheat to the barley crop, we shall find fresh evidence to confirm the opinion of specific saline substances being present in particular plants. In the latter of these grains, instead of phosphate of lime, there is always found a small quantity of either nitrate of soda or nitrate of potassa (salt-petre;) whence we may conclude, that these salts should be present in the soil where barley is to be grown. Whether they be or not, the farmer at present is entirely ignorant. These salts, though spontaneously produced by nature in many situations, still require the presence of certain substances for their production, several of which it is as improbable should be accidentally furnished, as the salt itself. It has been objected, that if this salt be found ever so necessary to the barley crop, yet its expensiveness will preclude the possibility of its being used. This is erroneous. Although salt-petre, if required in large quantities as a manure, would be too expensive, yet in the quantity actually wanted, its price is an object of little consideration. The simple process of steeping the seed in a solution of it would probably be sufficient; for which purpose a few pounds would suffice for an acre of land. What has been just advanced concerning the necessity of particular saline bodies to the wheat and barley crops, may be further extended to other crops, and thus add fresh evidence to support the conclusions already drawn. It is well known that bean straw always yields, on incineration, a large quantity of subcarbonate of potash; but whether the subcarbonate exist in the straw, or be formed by the decomposition of a sulphate, or other salts of a potassa, has never been determined. To determine which of these is present in the entire vegetable, would be to furnish information concerning the means of rendering that crop more uniformly successful than it now is. Can prejudice so far operate on the mind, as to make it discountenance the belief, that some particular salt is pos-

consumption for the inhabitants of Great Britain, and could not under the most promising circumstances be much extended.

From these facts, from the necessities of Great Britain, the exhausted state of the continent, and its inability to supply her demands, the *superiority* of American* wheat, over that of northern Europe, and the earlier maturity of our crops, a flattering prospect is presented of better prices for our bread stuffs; an additional incitement to agricultural industry.

Of the cotton market, the prospect is not so discouraging as generally believed; though Great Britain is experiencing unparalleled distress; and monopolies and protection laws, sinister and conflicting interests, may long continue her misfortunes; yet her manufacturing system has proceeded too far to be retracted; the education, habits and interests of a powerful class will resist the efforts of her ministry to retrench a system, whose pernicious and inordinate extent is admitted by many of its former and most conspicuous advocates; and it is well authenticated, that the excess of domestic supply, or the increased exertions of the manufacturer, more than the decline of foreign demand, has produced the temporary distress of her cotton trade; which, *instar omnium*, will have its flux and reflux, its re-gorgement and its revulsion—the balance will be restored and the current run as usual. While the manufacturer can find a purchaser, he will continue his labours. The export of this article from England, the first six months of the present year, has exceeded that of the same period of the last year; and the present decline, it is said, does not exceed the ordinary fluctuations of commerce. In this great foreign market, the character of American cotton has sustained a successful competition with the most favoured regions of the globe, and its continuance may be safely presumed.

In our own country, the progress of manufactures will justify the planter in large calculations for the demand of this article. In 1805, about one thousand bales made the total demand of this branch of manufacture in the United States. In 1816, an official report to Congress, states the domestic consumption of this material at 90,000 bales, and it is now believed to be five times this amount.

What evil *sequelæ* may ultimately attend this morbid growth, this extravagant devotion to the manufacturing industry, it is not my duty, if it were in my power to predict. The thread is drawn, the wheel is flying; how many revolutions, before the officious Atropos shall tender her unwelcome services, eventful time will disclose. To make a present advantage, to derive a partial good from an evil which we cannot avert, is the part of true philosophy. From this source a dawn of hope is presented to the agriculturist, and many years, possibly ages, of profitable labour may yet reward him.

From these considerations—from the physical advantages of a larger rotation, the extended prospects of a market, and the value of the article at home and abroad, I have adopted and recommend to your attention, experiments of the growth of cotton: if error be imputed to me, I stand counselled by the judicious and classic sentiment, *nulla pallescere culpa*.

The result of my experiment of thirty acres of cotton, (upland species,) the present year, it is not yet in my power to state, as the gathering will not be completed before the last of December; an earlier period than is usual in the south. A season so unpropitious has not occurred, perhaps, in the memory of man. The unprecedented drought of the spring has retarded its growth and maturity many

weeks. The planting was commenced on the 5th of May, and finished on the 15th, and though the growth ultimately became luxuriant, it was too late for a full return, five weeks elapsing before it was fully up; a circumstance unparalleled in the annals of agriculture—yet southern planters, who have viewed it, pronounce it a respectable crop in point of quality, and of beautiful staple. What may be the extent of injury from the continued autumnal rains, I cannot yet know; to such calamities all crops are equally subject.

This experiment was made on the clayey soil of my Appleby farm. From other planting of the same day, on a small scale, on the hickory and black walnut lands of Transquakin, of much lighter character, a heavy gathering was obtained, three weeks earlier than from the former, notwithstanding an inferior and most slovenly cultivation, and the former on the clay soil, under the finest possible culture, as many of you have witnessed.

The inference from these facts, contrary to the opinion of some modern writers of the south, is clearly in favour of light soils for cotton; perhaps, in our climate only, where a short summer, comparatively, makes the accelerated growth of a warm soil, the most important point of security.

My crop of *Palma Christi* has been rendered considerably abortive by the same cause, the drought; and not more than three acres of ten vegetated at all. The domestic and foreign demand for this article are both extensive, and though the market has suffered a depression, it is quoted in the prices current of New York at \$1.90 per bushel. The product of one bushel of seed is about three gallons of oil, which will usually command \$1.50 per gallon—and 25 bushels per acre will, from my experiment, form a reasonable predicate for calculation, affording in the result, to the planter and the manufacturer, a liberal compensation for his labour.

Be not startled, gentlemen, when I mention another crop which I think of introducing, the following season, into Dorchester—the *Rubia Tinctorum*, or Madder plant, which will infallibly succeed in our climate, and holds out a fair promise to the cultivator. It is largely grown in a parallel of latitude, more than thirteen degrees north of us, in the unkind, cold and humid climate of Holland—and the market is co-extensive with civilization.

One other crop merits our most special attention; one, whose latitude, soil, climate and market, are emphatically our own; one, which will give strength and activity to our teams, richness and profusion to our dairies, and will adorn the generous and hospitable board with the choicest viands; and yet one, I am compelled to say, whose introduction into the county, might fall under the denunciation of the *frugal* and *fastidious* farmer, a *martyr* to the odious epithet of *innovation*. The large and valuable family of the grasses, is that to which I would call your attention. The neglect of this branch of agriculture is one of our most palpable errors. To name to this intelligent audience the comforts and luxuries of life, flowing directly from this source of industry, would be presumptuous; to attach the delinquency, I am justified by the notoriety of the fact. The deepest interests of the farmer are intimately connected with this object of attention; and yet, it is almost wholly neglected, and the small quantity of grasses grown, are considerably diminished in value, by premature harvesting. Frequent and infallible analyses have established the fact, that the grasses contain the most nutriment, when their seed is matured; and if cut, when in flower, the weight of nutritive matter lost exceeds half its value.

Many roots of equal value with the grasses, are totally neglected as food for cattle. The carrot, the beet, the parsnip, and the potato are all worthy of attention for this purpose. The turnip, even the far famed species of *ruta baga*, is worth very little

more than its weight of water and woody fibre, yielding in a hundred parts, not three of nutritive matter.

It may not be irrelevant to remark, that the proximate principles, which contain chiefly the nutritive powers of vegetables, are saccharine matter, mucilage and gluten. To ascertain, *on an average*, and compare the relative proportions of *the* principles, in esculent plants, before we adopt or select them for cultivation, is unquestionably a point of primary importance. In this, or any other branch of our agricultural profession, where my feeble services may avail you, I freely tender them.

In regard to the carrot, I have obtained a few days past, from a hundred parts, ten of saccharine matter and four of mucilage, making fourteen in a hundred of nutriment. The beet,* from which I expected more, did not yield so much as the carrot, which may possibly be ascribed to its being a very imperfect and defective root. The potato I have not examined; but it is said to yield one-fourth of its weight of nutriment, chiefly *starch*.

To conclude, gentlemen, permit me to remark, that be your rotation large or small; your lands rich or poor; your crops indigenous or exotic, without thorough draining, your expectations will be disappointed—under the influence of stagnant waters your best hopes will be frustrated, your soil will be vitiated, your crops drowned, the atmosphere of your dwellings will be contaminated by noxious exhalations—and bilious infection, with all its retinue of evils, will harass you for life. Drain your lands, reclaim your marshes; rely not upon the proffered, but vain hope of state treasury, and state agency, in this important affair: they are illusive phantoms, which will operate only to abstract you from realities. You will command the retribution of health, wealth and happiness.

The luxuriant issue of the experimental crop of wheat and corn, the present year, on the reclaimed marshes of our southern friend, (Mr. Slawson,) to whose meritorious energies I have justly borne witness on a former occasion, opens to your view a wide field of well founded anticipation. By a moderate portion of industry, economy and skill, you may develop and enjoy those hidden treasures, riches, comforts and luxuries of life, which a kind Providence has designed for those who ask and seek her bounties.

Finally, gentlemen, I have to tender my thanks for the polite attention with which you have honoured me, and to the members of this institution I tender an acknowledgement of the high sense of obligation which I entertain, for the distinguished instances of kind feelings which they have exercised towards me; and I take this occasion to repeat, that though I decline the honour of a re-election for the ensuing year, as President of this society—yet, as far as my feeble exertions may be serviceable, they will be ardently continued, for the promotion of the science and practice of a profession which I have adopted, and which I hold to be one of the most independent, most honourable, most inviting, and most useful of the occupations of man.

ON HEMP, WOOL AND TOBACCO.

The following letter was received from a highly respectable and intelligent gentleman of Baltimore, by a gentleman of this town, under date of November 8th, 1826—and will no doubt be read with interest by the tobacco planters and others of this state.—*Zanesville Messenger*.

In reply to several written queries handed me when I had the pleasure to see you here, and in compliance with your request to communicate any information that I might deem useful to the citizens

* *Analysis of American Wheat*.—From 100 parts of white flint wheat, grown in Dorchester, Md. on a clayey soil, I obtained 30 parts of gluten. Wheat grown in northern Europe, is stated to yield only about 20 parts of gluten in 100.

* From a fine beet, since procured, I obtained 15 parts of saccharine matter in 100.

this infant institution the fostering hand, for the interests of the farmer.

Are these no interests to command the respect of the community? have the means no efficacy in their protection, before eyes of the dullest vision? I presume that no friend or adversary will answer in the negative. Is the reluctant farmer apprehensive of imputation on his character, for promptly and generously contributing the influence of his mind, body and purse to this great cause of humanity? to the science and practice of his profession? The profession of agriculture, gentlemen, associates no imputation, no guilty blush—its suffusions are those of health, contentment, and gratitude to the divine author of all good. The profession of agriculture involves as much skill, as much interest, and as much honour, as any object within the range of the attention or the action of man.

Agriculture may claim, without arrogance, a choice niche in the temple of science; her sphere of influence, the extent and variety of her research, her utility, her enchanting beauty, will extort from her proudest rival, confessed equality.

As an art, agriculture will not suffer from a comparison with any of the employments of man—as a judicious writer has justly remarked, “it is agriculture, not manufactures, that renders a country independent; that produces the necessities of life, this its conveniences—the former imparts life and vigour to man, the latter feebleness and profligacy.”

If then, the objects are great and honourable, and the means to accomplish them, fair and efficacious, what motive can be offered by the being who weighs his actions in the scale of reason, for withholding his co-operation.

I am happy to bear witness that the county at large has done itself honour; our members have multiplied since our last exhibition; our means are enlarged; our premiums are increased in value and variety; demonstrations are numerous and obvious that Dorchester is destined to occupy a lofty stand for agricultural character, in the highly respectable group of her sister counties.

In the performance of this, one of the duties of the office with which you have kindly continued to invest me, I shall occupy but a short space of your time, in presenting to your view such prominent objects, as I conceive may merit a portion of your attention—I shall avoid as far as possible, the trite and usual subject of manures; their combinations and their respective adaptations to soils of different characters, as one, of which you are already as fully informed as the learning and experience of the day, afford the means; and I shall claim your indulgence on subjects, perhaps not so familiar, but of equal interest to the agriculturist.

I shall offer no apology for attempting to introduce into Maryland, the growth of cotton as a staple crop; and shall endeavour to demonstrate the absolute necessity of the introduction of new and additional crops; first, upon physiological principles; secondly, upon a view of our commercial relations, so far as they immediately affect our markets; and thirdly, I shall notice such relevant circumstances as may bear upon the same point, or, generally tend to promote the agricultural interest of the county.

On a former occasion, I perhaps laboured against the current of popular opinion, to establish what might have been termed a favourite hypothesis; yet what I would dare to denominate well settled principles of physiology, that vegetables, like animals, have their preferences of food and habitation; an instinctive faculty with which they are endowed by nature for their health and nutrition; and though this principle may be partially modified, yet it cannot be eradicated, or totally perverted by the art or power of man. The one will flourish on dry and sandy banks; another in the deep morass, and even in the beds of rivers will be found a luxuriant vegetation, while others perish by submersion; one will

perforate the earth for many feet in depth, in quest of food; while another will rely for its support on the surface soil—one will gorge and thrive on coarse undecorated materials, while another will select such finer particles only, as have been eliminated from the refining laboratory of nature; some are carnivorous and require, indispensably, a supply of animal food, without which they perish, or degenerate into worthless existence; and others, herbivorous, are content with a vegetable diet alone; and their products are as various as their food; exhibiting an infinite diversity of constitutions; of ultimate principles, infinitely permutable, variously arranged and proportioned, forming proximate components in endless varieties.

From these principles are derived the obvious advantages of diversifying our crops; of cultivating as many of our native plants as may be found valuable; and of introducing as many exotics as may admit of acclimation, and be adapted to our commercial or domestic purposes.

To illustrate more fully this interesting subject, I will assume, that wheat is a carnivorous vegetable, and subsists chiefly upon animal food: the element nitrogen is peculiarly characteristic of animal matter, constituting in regard to ultimate principles, the essential discrimination, between animal and vegetable substances: does it require much discernment to perceive, that the continued growth of this plant alone, in the most fertile field, would, by its extravagant consumption of this element, shortly class the soil, in common reputation, with the exhausted and impoverished lands.

It is literally true, that this great staple of our country, once its boast for luxuriance and quality, contains this animal principle, which renders it more nutritive than any other vegetable. It forms, in this respect, the connecting link between the two organic creations; yielding upon analysis from twenty to thirty per cent. of a substance called gluten, which exhibits ammonia, and other results, precisely the same as the animal albumen. One of the elementary principles of this ammonia, is nitrogen.—Hence it follows, that the grain of wheat must require more than any other vegetable, this element for its full development, maturity and perfection; and continued, almost solely, as it has been, for a century or more in our soil, and generally too, without artificial restoration of the soil by animal manures, which alone can furnish it in competent quantities; and without respite for the kindly operations of Providence to perform the task, by the gradual absorption from the atmosphere of this element, supplied by the various emanations of decomposing animal bodies; is it not obvious that the farmer, who offending against the laws of nature, and presumptuously spurning the precepts of reason and of science, may have adopted the heterodoxy, and made the experiment, shall truly acknowledge his merited disappointment and mortification? His plant may unfold a leaf of flattering promise, but his grain will be imperfect; it will be worthless; because his soil had been exhausted of its essential component—his corn, his cotton, his various other crops, may flourish in his impoverished soil, incapable of wheat, divested of its nitrogen, yet replete with the elements of other vegetables.

To these, then, devote your exhausted soil; diversify your crops in wide ranging circles of time and varieties, that art and nature may have time to operate a supply of the defective elements,

Thus direct your series, and not by the dogmas of ancestral habits, which at the time of their adoption, needed not so urgently the discrimination. The lands were new and fertile, in all the principles of vegetable life; the population was more sparse and less luxurious; the demand was not so great, and the supply was greater.

As the human family multiplied and its wants increased, so has a kind Providence endowed man

with a progressive talent for improvement in knowledge and means, pro rata, to acquire them. To neglect this talent, to resist this impulse, to continue in the limited sphere of primitive society, in voluntary darkness, when the great God of nature had ordained a diffusion of light and knowledge, for the comfort and elevation of man, is to reject the divine mandate, and to spurn those favours of moral and physical character, by which intelligence had marked his superiority in the scale of creation.

My very intelligent audience need not the rebuke, but such are to be found who adhere to old systems, because they are old; though reason, science, experience and interest, imperiously demand the ill famed innovation.

To the rational and unprejudiced mind I submit the interesting question: does not physiology teach the absolute necessity of introducing into a country, relying upon two staple crops only for a century past, others, which experience may prove, are adapted to our soil and climate? Both reason and experience have settled this question; its established principles leave no doubt; and precarious markets demand the experiment. In this sentiment, every class and profession of the community, are deeply interested; and heedless of it, the wealthy and indigent will be involved in promiscuous embarrassment.

It is notoriously true, that from change of soil and climate, destructive insects and depressed markets, the wheat crop, once the great staple of our country, is failing as a resource for the farmer; his corn serves him for little more than his domestic uses.

To remedy these defects by new crops, to discover such as will flourish in our climate and soil, and command a better profit, or enlarge the chances of market, are unquestionably objects of the first magnitude: the process may be difficult, but it is rendered more so, by the insuperable addiction of most men to inveterate habits of thought and action, right or wrong, than by any other circumstance.

To assist the judgment in the adoption of a new series of crops, a prospective view of their demand and probable prices, would form an interesting topic; but here, unfortunately, we have but few data, upon which we can make an estimate.

Our commerce with Great Britain, subsisting once upon the basis of mutual interests, afforded to each a liberal reward for industry; she received the fruits of our soil, and gave us in return her manufactures. When her policy or her avarice had closed her ports against American productions, we retaliated the measure by excluding her goods, and manufacturing for ourselves; by this ill judged substitution of mutual annoyance for mutual kind offices, each have materially suffered, and would willingly, perhaps, if practicable, resume their former position. Whether at all, or when this point may be regained, and the sound policy of a liberal commercial intercourse restored, is a political problem of difficult solution. The unprofitable effects are apparently becoming re-active causes, and promise a partial restoration to the ground from which they have so unwisely wandered: one, to which the American agriculturist must look with the deepest interest, as materially affecting the value of his productions.

England has been coerced by her internal distresses, to commence a retrogression, by an imperfect modification of her corn laws; and there is reason to hope that she may repeal them.

This system of covetous policy has brought Europe to the verge of ruin, and has recoiled upon its author, with a deleterious influence. It has destroyed the objects of its creation, by its grasping avarice; it has impoverished the continent and itself. By official reports, the whole stores of the Russian, Prussian, and Danish magazines, with those of Bremen and Hamburg, would not furnish ten days'

consumption for the inhabitants of Great Britain; and could not under the most promising circumstances be much extended.

From these facts, from the necessities of Great Britain, the exhausted state of the continent, and its inability to supply her demands, the superiority of American wheat, over that of northern Europe, and the earlier maturity of our crops, a flattering prospect is presented of better prices for our bread stuffs; an additional incitement to agricultural industry.

Of the cotton market, the prospect is not so discouraging as generally believed; though Great Britain is experiencing unparalleled distress; and monopolies and protection laws, sinister and conflicting interests, may long continue her misfortunes; yet her manufacturing system has proceeded too far to be retracted; the education, habits and interests of a powerful class will resist the efforts of her ministry to retrench a system, whose pernicious and inordinate extent is admitted by many of its former and most conspicuous advocates; and it is well authenticated, that the excess of domestic supply, or the increased exertions of the manufacturer, more than the decline of foreign demand, has produced the temporary distress of her cotton trade; which, *instar omnium*, will have its flux and reflux, its re-gorgement and its revulsion—the balance will be restored and the current run as usual. While the manufacturer can find a purchaser, he will continue his labours. The export of this article from England, the first six months of the present year, has exceeded that of the same period of the last year; and the present decline, it is said, does not exceed the ordinary fluctuations of commerce. In this great foreign market, the character of American cotton has sustained a successful competition with the most favoured regions of the globe, and its continuance may be safely presumed.

In our own country, the progress of manufactures will justify the planter in large calculations for the demand of this article. In 1805, about one thousand bales made the total demand of this branch of manufacture in the United States. In 1816, an official report to Congress, states the domestic consumption of this material at 90,000 bales, and it is now believed to be five times this amount.

What evil *sequelæ* may ultimately attend this morbid growth, this extravagant devotion to the manufacturing industry, it is not my duty, if it were in my power to predict. The thread is drawn, the wheel is flying; how many revolutions, before the officious Atropos shall tender her unwelcome services, eventful time will disclose. To make a present advantage, to derive a partial good from an evil which we cannot avert, is the part of true philosophy. From this source a dawn of hope is presented to the agriculturist, and many years, possibly ages, of profitable labour may yet reward him.

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The result of my experiment of thirty acres of the upland species, the present year, it is not in my power to say. The gathering will not be completed until November, an ear-ly season for the cotton. A season so early, in the month of November, in the middle of the year, is a thought of the

weeks. The planting was commenced on the 5th of May, and finished on the 15th, and though the growth ultimately became luxuriant, it was too late for a full return, five weeks elapsing before it was fully up; a circumstance unparalleled in the annals of agriculture—yet southern planters, who have viewed it, pronounce it a respectable crop in point of quality, and of beautiful staple. What may be the extent of injury from the continued autumnal rains, I cannot yet know; to such calamities all crops are equally subject.

This experiment was made on the clayey soil of my Appleby farm. From other planting of the same day, on a small scale, on the hickory and black walnut lands of Transquakin, of much lighter character, a heavy gathering was obtained, three weeks earlier than from the former; notwithstanding an inferior and most slovenly cultivation, and the former on the clay soil, under the finest possible culture, as many of you have witnessed.

The inference from these facts, contrary to the opinion of some modern writers of the south, is clearly in favour of light soils for cotton; perhaps, in our climate only, where a short summer, comparatively, makes the accelerated growth of a warm soil, the most important point of security.

My crop of Palma Christi has been rendered considerably abortive by the same cause, the drought; and not more than three acres of ten vegetated at all. The domestic and foreign demand for this article are both extensive, and though the market has suffered a depression, it is quoted in the prices current of New York at \$1.90 per bushel. The product of one bushel of seed is about three gallons of oil, which will usually command \$1.50 per gallon—and 25 bushels per acre will, from my experiment, form a reasonable predicate for calculation, affording in the result, to the planter and the manufacturer, a liberal compensation for his labour.

Be not startled, gentlemen, when I mention another crop which I think of introducing, the following season, into Dorchester—the *Rubia Tinctoria*, or Madder plant, which will infallibly succeed in our climate, and holds out a fair promise to the cultivator. It is largely grown in a parallel of latitude, more than thirteen degrees north of us, in the unkind, cold and humid climate of Holland—and the market is co-extensive with civilization.

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To conclude, gentlemen, permit me to remark, that be your rotation large or small; your lands rich or poor; your crops indigenous or exotic, without thorough draining, your expectations will be disappointed—under the influence of stagnant waters your best hopes will be frustrated, your soil will be vitiated, your crops drowned, the atmosphere of your dwellings will be contaminated by noxious exhalations—and bilious infection, with all its retinue of evils, will harass you for life. Drain your lands, reclaim your marshes; rely not upon the proffered, but vain hope of state treasury, and state agency, in this important affair: they are illusive phantoms, which will operate only to abstract you from realities. You will command the retribution of health, wealth and happiness.

The luxuriant issue of the experimental crop of wheat and corn, the present year, on the reclaimed marshes of our southern friend, (Mr. Slawson,) to whose meritorious energies I have justly borne witness on a former occasion, opens to your view a wide field of well founded anticipation. By a moderate portion of industry, economy and skill, you may develop and enjoy those hidden treasures, riches, comforts and luxuries of life, which a kind Providence has designed for those who ask and seek her bounties.

Finally, gentlemen, I have to tender my thanks for the polite attention with which you have honoured me, and to the members of this institution I tender an acknowledgement of the high sense of obligation which I entertain, for the distinguished instances of kind feelings which they have exercised towards me; and I take this occasion to repeat, that though I decline the honour of a re-election for the ensuing year, as President of this society—yet, as far as my feeble exertions may be serviceable, they will be ardently continued, for the promotion of the science and practice of a profession which I have adopted, and which I hold to be one of the most independent, most honourable, most interesting and most useful of occupations of man.

By a gentleman of this town, under date of the 8th, 1826, and will no doubt be read with interest by the tobacco planters of this state.—*Zanesville Messenger*.

In reply to several inquiries, I have to say, when I had the pleasure of your compliance with your request, I have the information that I mis-

* From a fine beet, since I have obtained 14 parts of saccharine matter in 100 parts.

of Ohio, I proceed to remark, that the "present price" varies from \$3.50 to \$25, in accordance with the various shades of quality; very little, however, that comes to market, will command the highest price named; but tobacco carefully selected, well qualified, and every hand *fine yellow*, would sell readily at this price. The greater proportion, however, commands from 6 to \$11.

The future price of Ohio tobacco depends partly on the character which may be established for it in Europe, and partly on the extent of the crop in Ohio and Maryland.

As regards the character of the Ohio tobacco, I am unable to perceive why it should not be favourable, but rumours are afloat, that in Germany it has been pronounced inferior to the Maryland in point of flavour. Time will test the correctness of these rumours, and I hope prove them to be unfounded. As regards the extent of the Ohio crop, you are of course better informed than I can possibly be; hence on this point I would be glad to receive information from you. The Maryland crop is considerably below an average crop in quantity, and the quality is admitted on all hands to be inferior.

It must, however, be borne in mind, that there is as much of the last Maryland crop still in the state warehouses as, when added to the quantity made this season, will make a full average crop. The Ohio planters will have the advantage in the quality of their tobacco, and I think there is reason to hope that for *fine yellow*, and *fine red*, such a price will be obtained as will reward them for their labour. To obtain this, however, it is necessary that great attention be paid to selecting and assorting the tobacco, and to packing the same quality and colour together; for purchasers are very much disposed to rate the quality from the *inferior*, rather than the *superior* tobacco packed in the hogsheads.

Last season, some of the Ohio hogsheads were made too small; and consequently the shippers, who pay for freight by the hogshead, made complaints about "light weight." It is therefore better that they be made the full Maryland size, say 49 inches long, and bulge and head added together not to exceed 70 inches. A hogshead of these dimensions will contain from 7 to 800 lbs. of yellow tobacco.

This is the proper market to which to send the fine tobacco, as it is only here that the quality is properly understood; that it is miserable policy to send the inferior qualities here, as they only produce sufficient to pay the expense of carriage and other charges: hence, whilst they pay nothing on the labour bestowed on them, they increase the charges on the fine tobacco by increasing the price of transportation. It is better, then, to send the trash of green, brown and olive down the river, or permit them to remain at home.

As regards the proper time to send to market, I have to remark, that the earlier it is forwarded after being properly qualified, the better; for the expense of putting a hogshead of tobacco into the state warehouse for *one day* is the same as if you permit it to remain there for *one year*; hence, by sending early, you have the choice of the period of sale without any additional charge.

There is some diversity of opinion as to the advantage of curing by fire. In Maryland the planters cure by firing; they are not able to obtain the fine colour without it. But many suppose that in your State, where the soil is rich and the growth quick, it could be sufficiently qualified and the fine colour obtained without the aid of fire. And as this can be done, it is the opinion of Mr. Boyd, one of our inspectors, that the tobacco would be more valuable than if cured by fire, as it would be free from the smoky flavour which he deems an objection.

On the other hand, I have conversed with two gentlemen, recently returned from Germany, who concur in opinion with the inspector, in relation to

the ordinary qualities; but they think the fine yellow ought to be fired—that the smoke flavour is not objected to in the north of Europe, where this description is mostly used—and that by the firing a certain sweetness is imparted to it which it would not otherwise have.

Whilst those who are deemed most competent to judge differ so widely, it would be the part of practical wisdom to qualify some on each plan, that the matter may be tested.

If the *freemen* of Ohio persevere, they will put down all competition on the part of the slave states in relation to the finer qualities of tobacco. In Maryland, the fine yellow or kite foot can only be obtained from lands newly cleared. The second crop is inferior to the first, and the third to the second. If, then, they continue the cultivation in this state, they will shortly have no land to clear; whilst in Ohio you have lands in abundance, which you are desirous to clear whether you grow tobacco or not. The result of the matter will be, that the fine qualities which will bear the heavy expense of transportation, will be grown in Ohio, whilst the inferior quality will be grown in this state convenient to market.

The "cause of the decline in price" may be accounted for by stating the fact, that there never was any thing to justify the extravagant prices paid last season, and that those who made investments at those high prices sustained a loss on their shipments; had they continued to pay the same prices, they must all have been ruined.

I have recently examined a very beautiful sample of hemp, said to be cleaned in Kentucky by a machine, without having been previously either *dew* or *water* rotted; and I am assured by one of our most respectable manufacturers of cordage, that this sample is in every respect equal to the best Russian hemp, and that he would cheerfully give for the same quality \$200 per ton: whilst the common dew rotted will not command more than \$120 per ton.

The *dew* rotted hemp is completely cried down, and to water rot it was objected to in your state, because it was not only laborious, but deemed very unhealthful in your climate. Should, however, the machine spoken of be found to answer, I see no good reason why the attention of the people of Ohio should not be turned to the growing of hemp. The protecting duty is about equal to the expense of transportation to the sea board; you would therefore be placed on an equality with the grower in Russia, and eventually you would drive him out of the market. It seems to me that this is a subject worthy of investigation by your men of public spirit. It is understood that your soil is admirably adapted to the growth of this article, and there is little doubt but that the cultivator would be better rewarded for labour bestowed upon it than if bestowed on the cultivation of any description of grain.

The subject of growing wool has already attracted some attention in your state, and I doubt not but those who embark with spirit in this branch of business, will profit by it. The time has arrived when the woollen manufactures of this country are about to increase with great rapidity—and as it seems to be admitted that wool rather deteriorates along the Atlantic sea board, whilst it improves in quality in Ohio, the time must come when the supplies for the manufacturing establishments in this district of country must be drawn from your state.

Your climate being suitable—your lands cheap, and the expense of transportation being but a small per centage on the value of the article, it seems to me that the rearing of sheep must prove to be a profitable business.

Ohio has already been distinguished for her *Merino* wool; and I hope by the aid of your public spirited citizens, some of the fine *Saxon* sheep lately sold to the north, will find their way to your genial climate.

FOR THE AMERICAN FARMER.

ON PERNICIOUS AND UNPROFITABLE PLANTS.

SIR,

West-Chester, Pa., Feb. 19, 1827.

Whilst a knowledge of the *useful plants* is an object of primary importance with the farmer and gardener, it is believed that it would be advantageous to be better acquainted with those which are *worthless*, or *pernicious*—and especially to learn the best modes of subduing and eradicating those which injure the crops, usurp the grounds, or impede the labours of the agriculturist. Without presuming, myself, to teach the most effectual and eligible methods of extirpating the vegetable pests of the farm and garden, I have thought it might be worth while to enumerate those plants which are most troublesome and injurious, in this region of country—and briefly to note the methods practiced, by our most judicious farmers, for keeping them in subjection. I shall notice them in the order in which they are presented in the *Linnean*, or sexual arrangement of plants—giving the botanical and common names, and accompanying them with such remarks as my limited information may suggest.* The agriculture of this vicinity has been supposed, by good judges, to be as neatly and advantageously conducted, as that of any other portion of the United States: but the art of subduing certain injurious weeds may be better understood, in some districts, than it is here. Certain it is, that our farms are infested by some pernicious plants which baffle all our efforts to get rid of them; and any information which may be elicited from other quarters, in relation to the objects of this essay, will doubtless be interesting and acceptable to a number of your readers.

Yours, respectfully,

W. D.

J. S. SKINNER, Esq.

Notices of Pernicious and unprofitable Plants, which infest the Farms in Chester county, Pa.

(Read before the CHESTER COUNTY CABINET OF NATURAL SCIENCE—communicated for the Am. Farmer.)

No. 1.

DIANDRIA.—MONOGYNIA.

Salvia lyrata. Wild sage. Meadow sage. Cancer weed.

This is a worthless plant, in an agricultural point of view, and frequently abounds on dry, sterile meadow banks; but it is not very troublesome. It is readily expelled by manuring the soil, during a rotation of crops, and introducing other plants of more value.

TRIANDRIA.—MONOGYNIA.

Scirpus. Club rush. Several species of this occur in low, wet meadow grounds, and are all worthless; but may be eradicated by draining and culture.

TRIANDRIA.—DIGYNIA.

Leernia oryzoides. Wild rice. Cut-grass.

This is a grass of little, or no value, and is very troublesome in the latter part of summer, by filling up ditches with its herbage, and impeding the progress of the water—thereby causing the adjacent grounds to be swampy. Careful draining, and culture with the plough, are the most effectual methods of extirpating this, and other aquatic weeds.

Bromus secalinus. Cheat. Chess. Brome-grass.

This foreign plant is chiefly injurious by mixing and growing with our small winter grain. It is particularly troublesome among wheat; and some farmers are less careful to weed it out than they might otherwise be, in consequence of a strange notion that it is nothing but degenerate wheat. This notion, of the transmutation of plants, was brought

* Those who may desire to see an accurate description of the plants here enumerated, are referred to the excellent Floras of Messrs. Torrey and Elliott.

from Europe by some of our credulous ancestors; but a curious circumstance happened in its transition hither. In Europe, they believed that wheat changed to *lolium*, or darnel; but when they brought the belief to this country, they happened to leave the *lolium* behind—so they very adroitly substituted *bromus* in its stead, as being the nearest like it of any thing they could find! All which goes to show, that vulgar errors are not to be defeated by accidents of that sort, but must be subdued by the acquisition of correct information. Constant care in the selection of seed, is obviously the mode to keep this plant, as well as *cockle*, out of the wheat field.

Andropogon. Wood-grass. Indian-grass.

Four or five species of this worthless grass prevail in our sterile old fields, and always indicate the owner to be an indifferent farmer. It can be got rid of at any time by improving the land.

Panicum. Panick-grass.

We have ten or twelve species of this grass, which are of little worth; and some of them are nuisances, not easily got rid of, especially the *P. crus galli*, or cock's-foot panick-grass. This species is a foreigner, and generally prevails in rich, moist meadows, and about the drains of barn yards.

Setaria glauca, Torrey. Fox-tail grass. Bottle grass.

This is an abundant grass, particularly in stubble fields, though it is pretty well kept under where other grasses have possession of the soil. Poultry feed on the seeds, but cattle are not fond of it. It is a foreigner. (To be continued.)

WOOL.

We have been assured that the wool produced last year by the flock of Mr. Sprigg, near Wheeling, was sold to the Messrs. Rapp, at Economy, for the sum of \$2400. It is supposed that not less than \$150,000 worth of wool was, within the last year, transported eastward from this city, Steubenville and Wheeling. When the Steubenville woollen factory was established a few years since, wool enough could not be procured west of the mountains to keep it in operation. Now there is a large factory at Economy. If protection were afforded against the fluctuation of foreign supply, there would soon be several great establishments for the manufacture of woollen goods in this city.

[Guernsey (Ohio) Times.]

HORTICULTURE.

HORTICULTURAL ITEMS,

From Loudon's Gardeners' Magazine for 1826.

Preservation of Apples in winter.—Robert Donald thus describes his method and success in preserving apples, in the Gardener's Magazine:

"I had a trench dug five feet wide, one foot below the surface of the ground, and twelve feet long. I covered the sides and bottom with turf, the grassy sides upwards, and then filled the space with golden knobs and some French crabs, about 2½ feet deep in the centre, sloping a little to the sides; I then covered them close with turf, the grassy side next the fruit, to keep them clean. I next had the ridge covered with mould a foot thick, to keep out the frost and exclude the external air. In the end of April I had them taken out, in fine preservation. I again last autumn kept 50 bushels in the same way with equal success."

Charcoal dust, the refuse of a charcoal pit, applied to the ground half an inch thick, and moderately mixed with the top soil, has been found a complete preventive of the depredations of the grub, of mouldiness in onions, and the clubbing in the roots of cabbages and cauliflowers.—*Lond. Hort. Trans.*

Loddige's Nursery, at Hackney, near London, contains more than 8000 species, exclusive of 2000

varieties of plants. The trees and shrubs are said to exceed in number those of any other collection in the world. Of the acer (maple,) there are 27 varieties; crataegus (thorn,) 47; fraxinus (ash,) 32; pinus (pine,) 40; quercus (oak,) 40; rosa, (rose,) with its varieties, 1450; salix (willow,) 192; ulmus (elm,) 20, &c.

Covent Garden Market.—The following abstract of the prices of forced and other vegetables in the London market, which are quoted from Loudon, cannot fail to excite surprise:

Feb. 7. Asparagus 10 to 12s per 100. Apples 16 to 20s per bushel.

Feb. 21. Cucumbers 21s per brace.

March 21. Colmar Pears 1l. 1s per dozen, and thought cheap. Strawberries 3s per oz. Sweet-water Grapes 2l. 2s and upwards per lb.

April 24. Grapes 24 to 30s per lb. Strawberries 2s per oz. Apples 24s per bushel.

April 18. Young Potatoes 2s 6d to 4s per lb.

May 16. Cherries 12 to 16s per lb.

June 3. Garden snails 1s per doz. English frogs 1d each; snakes 4d each; leeches 10 to 20s per hundred. See Gard. Mag pp. 216, 348.

Important fact in regard to Grasses.—Any certain soil, says Curtis, will maintain a greater, and produce more nutritious produce, if cropped with a number of different species of grasses, than it maintains and produces if cropped with only one or two species. This is a curious and important fact, and which has been unnoticed in previous works on the subject, as well as neglected in practice. If an acre of good land is sown with three pecks of rye grass, and one peck of the clovers or trefoil, 470 plants only will be maintained on the square foot of such land; if a larger quantity of these seeds is sown, whether of these two species, or of any other two, the extra plants vegetated (which will certainly appear at first, if the seeds are good,) will decay in a short time, and leave blank spaces to be filled up with weeds or spurious grasses; or, in fact, plants of different species, supplied by the soil, manure or neighbouring hedges. But if, instead of two species of grasses, eight to twenty different sorts are sown on the same soil, or that now alluded to, a thousand plants will be maintained on the same space, and the weight of produce in herbage and in hay increased in proportion.—*Hort. Gram. Wob. pp. 24, 245.*

It has been remarked by farmers, that if oats and peas are sown together, each in sufficient quantities for a crop, the product of each will be as great as if it had occupied the ground wholly. The only way in which I can account for this fact, as also that quoted above from Curtis, is upon the theory of Grisenthwaite, that different species of plants take up different qualities of food from the soil; that what is indispensable for the perfection of one, is not necessary to, or taken up by, another; that each requires a specific or particular food. Indeed, this is amply recognized in the rotation of crops. A succession of the same crops will inevitably deteriorate, unless the soil upon which they are sown is annually supplied with the specific food which they consume. We see this principle further illustrated in the alternations of spines which are constantly taking place in our meadows and in our forests. In Gloucester, Eng., the sainfoin will abide in the chalk soils ten years; after which the same ground will not grow sainfoin till ten other years have intervened (*Marshall*). In Holland it is considered unsafe to sow flax in the same field oftener than once in ten or twelve years. Grisenthwaite, it may be remarked, contends that a rotation of crops is not necessary; but this is only on the supposition, that the specific manure consumed by the crop is annually restored to the soil by the cultivator. It is well known that a young apple tree will not grow well where an old one has died or been dug up; yet a tree of another species may thrive well there.

Nurserymen, if they understand their business, never plant a species of tree where the same kind has been taken up, until the ground has been well manured and cropped two or three seasons.

The facts stated by Mr. Curtis are particularly important to grass husbandry. Grasses, like other plants, have their particular seasons of growth. There are several species which start with the first appearance of vegetation, and which blossom in April or May. Others start later, grow vigorously after the first have become stationary, and flower in succession, in June, July and August. Others preserve their vigour and growth until vegetation is checked by the frost of autumn. A pasture possessing these different kinds, some of which are in vigorous growth in every part of the grazing season, must possess a manifest advantage over that which has but one or two kinds, which only shoot with superfluous plenty in spring, in midsummer, or in autumn, independently of the consideration suggested by Mr. Curtis, that the number of plants, and the gross product, will be more than doubled; it affords a luxuriant growth, and abundance of nutritious feed, at all times. It is this property which gives a peculiar value to old pastures. In Great Britain they are esteemed a third more valuable for the dairy than pastures newly laid down; because they contain many grasses, some of which luxuriate at every season of the year. By sowing the many kinds of grasses which they contain, a new pasture will attain the value of an old one, the second or third year after seeding. A better attention to our indigenous grasses, and the introduction of more from abroad, would very much further the interests of American farming. J. B.

LADIES' DEPARTMENT.

THE VOW.

O clear that cruel, doubting brow!
I call on mighty Jove
To witness this eternal vow—
'Tis you alone I love.

"O leave the god to soft repose,
(The smiling maid replies.)
For Jove but laughs at lovers' vows,
And lovers' perjuries."

By honour'd beauty's gentle pow'r,
By friendship's holy flame!
"Ah! what is beauty but a flow'r,
And friendship but a name?"

By those dear tempting lips, I cry'd;
With arch ambiguous look,
Convinc'd, my Chloe glanced aside,
And bade me "kiss the book."

THE WEDDING.

If there be a scene in this wide world on which the eye of heaven could rest with complacency, it is when two hearts are bound in that tie which "no man can put asunder." And to those who are fond of observing the various scenes of life, the wedding-day incident will afford a theme in which fancy can revel in wild and happy luxuriance. Although it is a time for rejoicing, as every pretty face will tell by the smile that plays upon it; yet, at times, a solemnity will steal unawares over the mind, as we ponder upon the future, that all is wrapped in darkness, until our feelings will be for a moment lost in a mild rich reverie.

He who passes through life without ever feeling the soft raptures of that charm which woman possesses, when age has whitened his locks, and the incidents of his pilgrimage pass in review before him, will acknowledge that wedding scenes are sunny spots that glitter on the landscape of his

memory; they are scenes in which he would willingly become an interested participator, for he now feels that he is alone in the world; there is no heart that beats in unison with his; no hand to smooth the pillow where anguish dwells, nor hang with the fondness of affection over the severed frame.

But very different are the feelings of the young and enthusiastic, when they mingle in the wedding joy; gaze upon a happy groom and smiling bride. They have a thousand fairy links woven in a chain around them by the busy hands of Cupid. If, then, fancy is centered on an object, they long to make her their bride, to see her cheerful and happy; and if not, their eyes will roam around to find a fair one worthy of the affections they have to bestow. Yes; at such times there is a rapture in the thought, a joy in anticipation of that day when the sun shines sweetly upon their happiness; when their destiny will be linked with another; he to protect and cherish, she to love and soothe. Thus, one wedding creates another—may there be many.

SPORTING OLIO.

(From the Annals of Sporting, Dec. 1826.)
SALE OF A STUD OF ENGLISH HORSES.

HARDWICK STUD.

Hail, happy Britain! highly favoured isle,
And Heaven's peculiar care! to thee 'tis giv'n
To train the sprightly steed, more fleet than those
Begot by winds. *Somerville.*

The following account of a sale of horses in training, three years old, two years old, yearlings, brood mares, hunters, half-bred horses and colts, (the property of W. RUSSELL, Esq.) at Hardwick, near Sedgefield, in the county of Durham, on Thursday, Nov. 16th, shews the increasing estimation in which not only racing, but a cultivation of the breed of horses of the purest description, is held in this country. This remark applies with equal force to France, Germany, Russia, and even to the East Indies; no potentate, prince, or noble, deeming their stables furnished, unless in the possession of English-bred horses. Hence the importance of the subject, in a pecuniary view, not only to breeders, but to the nation at large.

We omitted to state that the sale was under the direction of Messrs. Tattersall, to whom we are indebted for the prices of the respective lots.

Abron, 6 years old, by Whisker, out of Altisidora. Lord Darlington, 450
Mustachio, 5 years old, by Whisker, out of Leon Forte. Mr. Dickinson. 520
Dunstable, 4 years old, by Whalebone, out of Defiance, (not sold.)

THREE YEARS OLD.

Hardwick, by Orville, dam by Dick Andrews, out of Desdemona, by Sir Peter, (not sold.)
Mumskull, by X Y Z, out of the Juggler's dam. Mr. Ridsdale. 39
Chestnut Filly, by Amadis, dam by Cerberus, grandam, Barefoot's dam. Mr. Dickinson. 45

TWO YEARS OLD.

Chestnut Colt, by Abjer, out of Watcote Lass; winner of the Tyro Stakes, at Newcastle, and engaged in the Derby, 1827. Ld. Londonderry 35
Bay Colt, by Grey Walton, dam by St. George. Mr. Cayton. 31

YEARLINGS.

Grey Colt, by Jonathan, engaged in the Foal Stakes, at Catterick, and Sapling, at York, in 1828. Lord Darlington. 320
Chestnut Colt, by Comus, out of Gonsalvi's dam; engaged in the Catterick Foal Stakes, York Sapling, and Foal Stakes at Doncaster, 1828. Lord Darlington. 300

Grey Colt, by Viscount, dam by Haphazard, out of Web. Col. Broadhead. 300

Grey Colt, by Abjer, dam, Lady Heron, by Marmion, out of Peterea, Dunsinane's dam. Mr. Powlett. 200

Brown Colt, by Abjer, dam by Dick Andrews, out of Desdemona, by Sir Peter. Mr. Dickinson. 15

Grey Filly, by Blacklock, out of the Delpini Mare; engaged in a match at York Spring, 1827, against Mr. Ridsdale's b. f. Ridotto, by Reveller, dam by Walton, 200 sovs, b. f. Two years old Course; in the Produce Stakes, at York, and ditto. at Doncaster, in 1829, (not sold.)

Grey Filly, by Viscount, out of Miss Gayton, by Lop, dam by Highflyer, out of the Yellow Mare, (not sold.)

BROOD MARES.

Dick Andrews Mare, out of Desdemona, by Sir Peter; stinted to Whisker. Mr. Payne. 150

Sister to Sultan, by Selim; stinted to Whisker or Lottery. Mr. Payne. 230

Filho da Puta Mare, dam by Precipitate (the dam of Camerton and Cardinal Wolsey;) stinted to Waverley. Mr. Dickinson. 40

HALF BRED.

Pecunia, the winner of many half-bred stakes; has been hunted, and mistress of great weight. Sir E. Mostyn. 150

Bay Filly, 3 years old, by Ardrossan. Mr. Fawcett. 30

Chestnut Colt, 2 years old, by Catton, dam by Hambletonian. Mr. Crofton. 35

Bay Filly, 2 years old, by Mozart. Mr. Furness. 19

YEARLINGS.

Chestnut Filly, by Viscount. Ld. Londonderry. 18

Brown Colt, by Werner. Mr. Wheatley. 16

Bay Colt, by Werner. Mr. Hall. 20

STALLIONS.

Dr. Johnson, by Walton. Major Healey. 100

Werner; nearly thorough bred, had great speed, and his stock are remarkably promising for Cocktail stakes and hunters, not sold.

THE DEATH OF THE STAG.

To the Editor of the Annals of Sporting.

SIR,—Oblige an old correspondent, Mr. Editor, with the insertion of the following pretty poem from the "Forget me not," just published. It is, I think, "quite in your line." Yours, &c. L. W.

It is morning, and the sky,
Like a royal canopy,
Burns with crimson and with gold;
And from out his cloudy hold
Joyfully breaks forth the sun,
While each thing he looks upon
Seems bright, as if only born
For the first glad hour of morn.

What sweet sound then pass'd along?
'Twas the skylark's earliest song:
What soft breath is floating by?
The wild rose's waking sigh,
Breathing odours, as the gale
Shakes away her dewy veil.

There are other sights than these,
Other sounds are on the breeze:
Hearken to the baying hound,
Hearken to the bugle's sound;
Horse tramp shout upon the ear
Tell the hunters' band are near;
Sweep they now across the plain,—
'Sooth, it is a gallant train:
Many a high-born dame is there;
Dance their rich curls on the air,
Catching many a golden hue,
Catching many a pearl of dew.

Flush the colours on their cheek,
Lovelier than the morning's break;
Scour the young knights far and wide,
As they would to battle ride;
Finding, gallant chase, in thee
Somewhat of war's mimicry.

Hark! the hunter's shouts declare
They have found the red deer's lair;
Rising from his fragrant sleep,
Where a thousand wild flowers creep,
With one sudden desprate spring
Rushes forth the forest king,
Like the lightning from the sky,
Like the wind, when winds are high.
Far, ere yet the train were near,
Dash'd away the noble deer,
As rejoicing in the speed
Which might mock the Arab steed:
As he pass'd the forest green,
Well his pathway might be seen;
Many a heavy oaken bough
Bent before his antler'd brow:
Shout and horn rung thro' the wood—
Paused he not beside the flood;
Foam and flake shone on its blue,
As the gallant stag dash'd through.
Long or ever mid day came,
Wearied stoop each lovely dame
In some green tree's shade, content
But to hear the day's event.
Still the stag held on his way,
Careless through what toils it lay;
Down deep in the tangled dell,
Or air the steep rock's pinnacle;
Stanch the steed, and bold the knight,
That would follow such a flight.
Of the morning's gallant train,
Few are those who now remain.
Wearily the brave stag drew
His deep breath as on he flew;
Heavily his glazed eye
Seems to seek somewhere to die;
All his failing strength is spent,—
Now to gain one steep ascent,
Up he toils—the height is won,
'Tis the sea he looks upon.
Yet upon the breeze are borne
Coming sounds of shout and horn;
The hunters gain the rock's steep crest—
Starts he from his moment's rest,
Proudly shakes his antler'd head,
As though his defiance said,
"Come, but your triumphs shall be vain!"—
The proud stag plunges in the main,
Seeks and finds beneath the wave
Safety, freedom, and the grave.

L. E. L.

MISCELLANEOUS.

IMPROVEMENT OF THE NAVY.

The bill for the gradual extension and improvement of the Navy, passed the Senate on the 17th ult. by an increased majority. Viewing this subject as one of great public interest, and the bill now before us as the most important measure in relation to the Navy, since the passage of the act of 1816, for its gradual increase, we think the following synopsis of its provisions will be acceptable to our readers, although the bill was published at large some weeks since.

The first section of the bill sets apart a permanent fund of three millions of dollars, for the gradual improvement of the navy, [the sum of five hundred thousand dollars per annum, for six years, being appropriated] the fund thus set apart and appropriated to be applied to the following objects, all which are designated in the bill itself. One of the first provisions of the bill relate to the establishment

ment of DRY DOCKS, the want of which has hitherto subjected the country to great loss, expense and delay, in repairing and fitting out our public vessels. The bill provides for the construction of two dry docks, the one to the north, and the other to the south, of the Potomac river.

The next provision of the bill directs the construction of a MARINE RAIL WAY at Pensacola, for the repair of sloops of war and other vessels of an inferior class. Railways have, it is understood, been used in Europe for vessels of this description with great advantage, combining in a great degree economy and despatch.

Another provision relates to the survey and improvement of NAVY YARDS, and the adoption of scientific plans for these objects.

Another, and perhaps the most interesting feature of the bill, is that which authorizes the establishment of a NAVAL ACADEMY. This subject has of late years created much interest in the public mind, and the want of such an establishment has been seriously felt by the country, and has certainly been very much and very generally desired.

The great object of the bill, however, and that towards which by far the greater portion of the fund will be applied, is the collection and preservation of Ship Timber, for the future construction of ships, of all the classes now used in the Navy of the United States. Without the immediate adoption of this policy, there are well founded apprehensions of a serious deficiency in the most valuable species of ship timber, *Live Oak*.

From this brief statement, it will be seen how extremely important are the provisions of the bill, which has just passed the Senate. Should it meet the sanction of the House of Representatives, which we see no reason to doubt, very little will remain to be done to put the Navy on a footing of respectability suited to its great importance, and the feelings and expectations of the country. Indeed, except a revision of the rules for the government of the Navy, and some alterations in the organization of the establishment itself, nothing will remain to be done, for many years to come, for the further advancement of this valuable and interesting arm of the national defence. We feel ourselves called upon to repeat our convictions of the great value of the bill, and to congratulate the country on its success. [Nat. Int.]

RECIPE.

(From the Indiana Whig.)

CURE FOR THE BITE OF A SNAKE.

As the publick in the western country are much interested in knowing whatever may be a good remedy for the poison injected into the human flesh by the bite of a snake, I think it my duty to state a fact within my own knowledge. About the year 1815 or 1816, one of my children was bitten by a copperhead, on the inside of both ankles, nearly at the same instant. I instantly procured pulverized charcoal and mixed it with as much hogslard as made it adhere. I then made a plaster of it, and applied it to the wounds, renewing the plaster every twenty or thirty minutes, for ten or twelve hours, at the same time giving the child fresh milk to drink. This remedy had the desired effect, and very little pain was endured after the first application. Not more than five minutes elapsed from the time the child was bitten until the cure was applied, and in that short time, so violent was the advance of the poison, being near a blood vessel, that its tongue was much swollen, and green matter was vomited by the child; but the effect of the antidote was nearly as instantaneous as the poison. Several of my neighbours in the vicinity of Newport, near Blairsville, this county, can attest the above facts.

JAMES M'CORMICK.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 2, 1827.

RAIL ROAD FROM BALTIMORE TO THE OHIO—After years of discussion, and attempts in every form, to excite a proper feeling on the subject of internal improvements which might be made contributory to the improvement of the state and of this city; after various surveys to ascertain the practicability, and expositions to show the benefit of canals—it would seem that the public mind is likely to settle down upon *rail roads*, as the most economical and efficient mode of facilitating the intercourse between the Chesapeake and the Western waters. In our next, we shall present our readers with the bases of the calculations which have conducted our *monied men* to this conclusion. It has all along been known, that unless they could be convinced and excited, nothing could be hoped; and we can now assure our readers, that we have never seen the *capitalists* of this city more united, nor more sanguine, nor more liberally disposed, than they appear at this time to be in the design to construct a rail road from Baltimore, by the valley of the Potomac and Cumberland, to some point on the Ohio.

Chamber of the House of Delegates, }
Annapolis Feb. 9th, 1827.

SIR,—I have the honour to inform you, that you were, on the 30th ultimo, elected by the House of Delegates of Maryland, a Director on the part of the State, in the Bank of Baltimore, for the present year. I have the honour to be, sir,

Your obed't serv't,

GIDEON PEARCE, *Clk.*

To J. S. SKINNER, Esq. *Ho. Del. of Md.*

One of your correspondents asks, What will prevent pigeons from injuring gardens? A hawk, nailed to a post, in a conspicuous part of the garden, will keep pigeons and fowls away. The wings of the hawk should be spread out wide.

TOBACCO.—Mr. Reuben N. Dorsey, of Anne Arundel county, sold this week, one hoghead at \$30 per hundred. Three of the same crop sold in November last, at \$22.50.

The above are stated merely as remarkable cases of high prices to show what may be occasionally had for tobacco of the very finest quality that can be made. With respect, however, to the general state of the market, it is fair to state, that a considerable quantity of the lowest grade has been sold within a few weeks for about four dollars—whilst little or nothing has been doing in tobacco of middling qualities.

Amount of inspections in the three State Warehouses for the last week, 113 hhd.

EVERGREEN THORNS, AND SUGAR MAPLES.

JOSHUA PIERCE, near George Town, requests us to say, that in a few days he will send to us for sale, 10,000 Pyracantha, or Evergreen Thorns, at six dollars per thousand. Also, some handsome Sugar Maples. Those trees are of good size, and would be ornamental in our yards, &c.

3d mo., 2d, 1827.

SINCLAIR & MOORE.

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Of the specific application of Fermentative, and Fossil or Saline Manures—Address to the Dorchester Agricultural Society, at their second Fair and Exhibition, Nov. 9th, 1826, by Dr. J. E. Muse—On Hemp, Wool and Tobacco—On pernicious and unprofitable Plants—Wool—Horticultural Items—Poetry, The Vow—The Wedding—Sale of a Stud of English Horses—Poetry, The Death of the Stag—Improvement of the Navy—Cure for the bite of a Snake—Editorial, Rail Road from Baltimore to the Ohio.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00	8 50		
BACON, and Hams, . .	lb.	6	10	9	12
BEES-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16½	20	22
Havana,	—	14	16		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	12		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	15	16	18
Dipt,	—	11	13		16
CHEESE,	—	8½	12	12	15
FEATHERS, Live, . . .	—	29	30	37	
FISH, Herrings, Sus.	bbl.	2 37½	2 50		
Shad, trimmed, . . .	—	5 50	6 00		
FLAXSEED,	bush	90	1 00		
FLOUR, Superfine, city,	bbl.	5 25	5 37½		
Fine,	—	5 00			
Susquehanna, superfi.	—				
GUNPOWDER, Balti. .	25 lb.	5 00		5 50	none
GRAIN, Ind. corn, yellow	bush	53	54		
white	—	53	54		
Wheat, Family Flour,	—	1 10	1 20		
do. Lawler, & Red,	—	1 00	1 10		
do. Red, Susque. . .	—	1 05	1 10		
Rye,	—	70	75		
Barley, Eastern . . .	—	1 10	1 20		
Do. country	—	90	1 00		
Clover Seed, Red . .	bush	6 25	6 50	7 00	
Ruta Baga Seed, . .	lb.	87		1 00	
Orchard Grass Seed, .	bush	3 50			
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, . . .	—	4 00		5 00	
Oats,	—	45	47	50	
Beans, White, . . .	—	1 38		2 00	
HEMP, Russia, clean, .	ton	250	260		
Do. Country	—	120	230		
HOPS, 1st sort, (1826)	lb.	18		25	
HOGS' LARD,	—	8½	10	12	
LEAD, Pig	lb.	6½	6½		
Bar	—	7½	8		
LEATHER, Seal, best,	—	21	25	32	
MOLASSES, sugar-house	gal.	31	50		75
Havana, 1st qual. . .	—	31	52	37½	
NAILS, 6a20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	1 75			
Turpentine, Soft, . .	—	2 50	2 75		
OIL, Whale, common, .	gal.	33	34	40	
Spermaceti, winter . .	—	70	75	88	
PORK, Baltimore Mess,	bbl.	11 50	12 00		
do. Prime,	—	9 00	9 50		
PLASTER, cargo price,	ton.	3 25			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3½	3½	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	8	10	12
WHISKEY, 1st proof, .	gal.	34	35		50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—		35	50	
SUGARS, Havana White,	c. lb.	13 00	13 50	14	15
do. Brown,	—	10 00	10 50		
Louisiana,	—	8 00	9 10	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	15		25	
SALT, St. Ubes, . . .	bush	48	50	75	
Liverpool ground . .	—	54		75	
SHOT, Balt. all sizes, .	cib.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 05	1 10	1 50	1 75
Port, first quality, . .	gal.	1 85	1 85	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	21		
Common, Country, . .	—	18	22		
Skinners' or Pulled, .	—	20	25		

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AGRICULTURE.

AGRICULTURAL MEMORANDA.

Agriculture of the Ancient Greeks.

It is remarkable, that in the time of Hesiod, who wrote upon agriculture one thousand years before the Christian era, the state of agriculture and other arts in the eastern countries, and even of its machinery, does not appear to have been materially different to what they are in the same countries at the present day. Property in land was recognized, the same grains cultivated, and the same domestic animals reared and employed; some led a wandering life and dwelt in tents, like the Arabs; and others dwelt in towns or cities, and pursued agriculture and commerce like the fixed nations.

The works of Hesiod, which constitute a part of his poem, are not merely details of agricultural labours, but comprise directions for the whole business of family economy in the country. The poem sets out by describing the state of the world, past and present, for the purpose of exemplifying the condition of human nature. This condition entails on man the necessity of exertion, to preserve the goods of life, and leaves him no alternative but honest industry or unjust violence, of which the good and evil consequences are respectively illustrated. Dissention and emulation are represented as two principles actively at work: much is said of the corruption of the judges, and virtue and industry strongly recommended. The poet proceeds to describe the prognostics of the seasons of agricultural labour, and gives directions for providing a house, wife, slaves, and two steers; how and when to cut down timber; to construct carts and ploughs, and make clothes and shoes; when to sow and reap, dress the vine, and make wine. He then treats of navigation, and gives cautions against risking every thing in one voyage: he describes the fit seasons for the coasting trade, and advises taking great care of the vessel at such times as she is not in use, and hanging up the rudder and other tackle in the smoke of the chimney. He concludes the "works" with various superstitious observances to family matters. The days contain a division of the lunar month, into holy, auspicious, inauspicious, mixed, and intermediary days, the latter being such as are entitled to no particular observance. Manures were applied; in Homer, an old king is found manuring his fields with his own hands; and the invention of manures is ascribed by Pliny to the Grecian king Augeas. Theophrastus enumerates six different species of manures; and adds, that a mixture of the soil produces the same effects as manure. Clay, he says, should be mixed with sand, and sand with clay. The seed was sown by hand, and covered with a rake. Corn was reaped with a sickle; bound in sheaves; carted to a well prepared threshing-floor, in an airy situation, where it might be threshed and fanned by the wind, as is still practised in modern Greece, Italy and other countries of the continent. Afterwards it was laid up in bins, or sheaths, or granaries, and taken out, as wanted by the family, to be pounded in mortars, or quern-mills, into meal. Thorns, and other plants for hedges, were procured from the woods, as we find from a passage in Homer, in which he represents Ulysses as finding Laertes digging and preparing to plant a row of quick sets.

The most desirable age of a ploughman, says Hesiod, is forty: he must be well fed, go naked in summer, rise and go to work very early, and have a sort of annual feast, proper rest, and good food and clothing: coats of kid skins, worsted socks, and half boots of ox hides in winter. He must not let his eye wander about while ploughing, but cut a straight furrow; nor be absent in mind when sowing the seed, lest he sow the same furrow twice. The vine is to be pruned and staked in due season;

the vintage made in fine weather, and the grapes left a few days to dry, and then carried to the press.

The productions of Grecian agriculture, were sheep, goats, swine, cattle, mules, asses, and horses; the grains and legumes at present in cultivation; and the vine, fig, olive, apple, date, and other fruits. It does not appear that artificial grasses, or herbage plants, were in use; but recourse was had, in times of scarcity, to the mistletoe and the cytissus.—*Ency. of Agriculture.*

Of the Agriculture of the Romans.

In the time of Cato the Censor, the author of *The Husbandry of the Ancients* observes, though the operations of agriculture were generally performed by servants, yet the great men among the Romans continued to give a particular attention to it; studied its improvement, and were very careful and exact in the management of all their country affairs. This appears from the directions given them by this most attentive farmer. Those great men had both houses in the town and villas in the country; and as they resided frequently in town, the management of their country affairs was committed to a bailiff, or overseer. Now their attention to the culture of their lands and to every other branch of husbandry, appear from the directions given them how to behave upon their arrival from the city at their villas. "After the landlord," says Cato, "has come to the villa, and performed his devotions, he ought that very day, if possible, to go through his farm; if not that day, the next. When he has considered in what manner his fields should be cultivated, what work should be done, and what not; next day he ought to call the bailiff, and inquire what of the work is done, and what remains; whether the labouring is far enough advanced for the season, and whether the things that remain might have been finished; and what is done about the wine, corn, and all other things. When he has made himself acquainted with all these, he ought to take an account of the workmen, and the working days. If a sufficiency of work does not appear, the bailiff will say that he was very diligent, but the servants were not well; that there were violent storms; that the slaves had run away, and that they were employed in some public work. When he has given these and many other excuses, call him again to the account of the work and the workmen. When there have been storms, inquire for how many days, and consider what work might be done in rain: casks ought to have been mended and cleaned, the villa cleaned, corn carried away, dung carried out, dung hills made, seed cleaned, old ropes mended, new ones made, and the servants' clothes mended. On holidays, old ditches may have been scoured, a highway repaired, briars cut, the garden digged, meadows cleared from weeds, twigs bound up, thorns pulled, far (bread-corn, maize,) pounded; all things made clean. When the servants have been sick, the ordinary quantity of meat ought not to have been given them. When he is fully satisfied in all these things, and has given orders that the work which remains be finished, he should inspect the bailiff's accounts; his account of money, corn, fodder, wine, oil; what has been sold; whether there is good security for what is owing. He should inspect the things that remain; buy what is wanting for the year, and let out what is necessary to be employed in this manner. He should give orders concerning the works he would have executed, and the things he is inclined to let, and leave his orders in writing. He should inspect his flocks; make a sale; sell the superfluous oil, wine, and corn. If they are giving a proper price, sell the old oxen, the refuse of the cattle and sheep, wool, hides, the old carts, old iron tools, and old and diseased slaves. Whatever is superfluous he ought to sell; a farmer should be a seller, not a buyer." (Cat. cap. 2.)

Columella and Palladius agree in stating, that the

best situation of lands, is not so much on a level as to make the water stagnate, nor so steep as to make the water run off with violence, nor so low as to be buried in the bottom of a valley; nor so exposed as to feel the violence of the storms and heats: but that in all these, a mediocrity is best; champaign lands exposed, and whose declivity affords the rain a free passage; or a hill whose sides gently decline; or a valley not too much confined, and into which the air has easy access; or a mountain, defended by a higher top, and thereby secured from the winds that are most pernicious; or if high and rugged, at the same time covered with trees and grass. (Col. lib. 2. cap. 9. Pal. lib. 1. cap. 5.) The situation of lands which Cato reckons the best, is that at the foot of a mountain with a south exposure. Varro and Pliny concur in this opinion, and the latter states that the best lands in Italy are so situated.

Cato says, "A landholder should apply himself to the cultivation of his fields in his youth; but he ought to think long before he builds. He ought not to think about planting, but he ought to do it. When he is about thirty six years of age, he may build, provided his fields are planted." (Cato, cap. 3.)

Men should plant in their youth, and not build till their fields are planted; and even then "ought not to be in a hurry, but take time to consider. It is best, according to the proverb, to profit by the folly of others." (Plin. Nat. Hist. lib. 18. cap. 5.)

Proportion the expense of building to the rent, or the profits arising from the farm.—"An edifice should be built according to the value of the farm and fortune of the master, which, immoderately undertaken, it is commonly more difficult to support than to build. The largeness of it should be so estimated, that, if any thing should happen to destroy it, it may be rebuilt by one, or at most by two years' rents or profits of the farm in which it is placed" (Pal. lib. 1. tit. 8.)

Of animals reared, the quadrupeds were of the same kinds as now in use; and to the common sorts of poultry they added thrushes, larks, peacocks, and turtle doves; they also reared snails, dormice, bees, and fish. The care of the poultry was chiefly committed to the wife of the farmer or bailiff; and it was chiefly near Rome and Naples where the most delicate birds were the most extensively reared.—When Rome was at her greatest height in the time of the Cæsars, the minor articles of the farm produce bore a very high price. Varro informs us, that "fat birds, such as thrushes, black birds, &c. were sold at two shillings, and sometimes five thousand of them were sold in a year from one farm. (Var. lib. 3. cap. 2.) Pea fowls were sold at 1l. 13s. 4d.; an egg was sold at 3s. 4d. A farm sometimes produced as many of these fowls as to sell at 500l. (Var. lib. 3. cap. 6.) A pair of fine doves were commonly of the same price with a peacock, 1l. 13s. 4d. If very pretty they were much higher in the price, no less than 8l. 6s. 8d. L. Anius, a Roman knight, refused to sell a pair under 13l. 6s. 8d. (Var. lib. 3. cap. 7.) Some kinds of fishes were highly valued among the Romans in the time of Varro. Hortensius, whom Varro used to visit, would have sooner parted with a pair of his best coach mules, than with a bearded mullet. (Var. lib. 3. cap. 17.) Herrius' fish ponds, on account of the quantity of fish, were sold at 33.333l. 6s. 8d. (Plin. Nat. Hist. lib. 9. cap. 55.) Lucullus's likewise at the same price.—(Id. lib. 9. cap. 54.)

Of the General Maxims of farm management among the Romans.

To sow less and plough better was a maxim indicating that the extent of farms ought to be kept in their proper bounds. Pliny and Virgil consider large farms as prejudicial; and Columella says, one of the seven wise men has pronounced that there should be limits and measures in all things. "You may admire a large farm, but cultivate a

one." And the Carthaginian saying, "that the land ought to be weaker than the husbandman," were maxims to the same effect.

The importance of the master's presence in every operation of farming was inculcated by many maxims: "Whoever would buy a field ought to sell his house, lest he delight more in the town than in the country," was a saying of Mago. "Wherever the eyes of the master most frequently approach," says Columella, "there is the greatest increase." It is justly remarked by the Rev. A. Dickson, that though "every person knows that the presence and attention of the master is of great importance in every business; yet every person does not know, that in no business are they so important as in farming."—(*His. of the An.* i, 206.)

That more is to be gained by cultivating a small spot well than a large space indifferently, is illustrated by many sayings and stories. "A vine-dresser had two daughters and a vineyard; when his eldest daughter was married, he gave her a third of his vineyard for a portion; notwithstanding which, he had the same quantity of fruit as formerly. When his youngest daughter was married he gave her the half of what remained, and still the produce of his vineyard was not diminished." (*Col. lib. iv, cap. 3.*) Pliny mentions a freedman, who having much larger crops than his neighbours, was accused of witchcraft and brought to trial. He produced in the forum a stout daughter, and his excellently constructed iron spades, shears, and other tools, with his oxen, and said, "These, Romans, are my charms." He was acquitted. (*Nat. His. 18, 6.*)

Ostentatious, or profuse culture is not less condemned than imperfect culture. "The ancients," says Pliny, "assert that nothing turns to less account than to give land a great deal of culture."—"To cultivate well is necessary, to cultivate in an extraordinary manner is hurtful." "In what manner then," he asks, "are lands to be cultivated to the best advantage?" To this, he answers, "in the cheapest manner, if it is good;" or "by good, bad things," which, he says, were the words the ancients used to express this maxim.

Industry is recommended by numerous maxims. "The ancients," says Pliny, "considered him a bad husbandman who buys what his farm can produce to him: a bad master of a family, who does in the day time what he may do at night, except in the time of a storm: a worse, who does on common days what is lawful on holidays: the worst of all, who on a good day is employed more within doors than in the fields." (*Nat. His. 18, 6.*)

Knowledge in matters relative to agriculture is inculcated by all the rustic authors. "Whosoever," says Columella, "would be perfect in this science, must be well acquainted with the qualities of soils and plants; must not be ignorant of the various climates, that so he may know what is agreeable, and what is repugnant to each; he must know exactly the succession of the seasons, and the nature of each, lest, beginning his work when showers and wind are just at hand, his labour shall be lost. He must be capable to observe exactly the present temper of the sky and seasons; for these are not always regular, nor in every year does the summer and winter bring the same kind of weather; nor is the spring always rainy, and the autumn wet. To know these things before they happen, without a very good capacity, and the greatest care to acquire knowledge, is, in my opinion, in the power of no man." (*Col. lib. 1, pref.*) To these things mentioned by Columella, Virgil adds several others.

Before we plough a field to which we are strangers," says Columella, "we must be careful to attain a knowledge of the winds, from what points they blow—the partial winds, and from whence, they blow the most violent. The nature of the climate, which is different from every other, is to be ascertained by the fathers of the family."

country; the qualities of the different soils; and what are the crops that each country and climate produces and rejects." (*Virg. Georg. 1, l. 1.*)

The making experiments, is a thing very strongly recommended to the farmer by our authors. "Nature," says Varro, "has pointed out to us two paths, which lead to the knowledge of agriculture, viz: experience and imitation. The ancient husbandmen, by making experiments, have established many maxims. Their posterity, for the most part, imitate them; we ought to do both, imitate others and make experiments ourselves, not directed by chance, but reason." (*Var. lib. 1, cap. 18.*)

Product.—A hundred fold, Varro informs us, was reaped about Garada in Syria, and Byzacium in Africa. Pliny adds, that from the last place, there was sent to Augustus by his factor, nearly 400 stalks, all from one grain; and to Nero, 340 stalks. He says he has seen the soil of this field, "which when dry the stoutest oxen cannot plough; but after rain I have seen it opened up by a share, drawn by a wretched ass on the one side, and an old woman on the other." (*Nat. His. cap. 5.*) The returns in Italy were much less extraordinary. Varro says, there are sown on a jugerum, four modii (pecks) of beans, five of wheat, six of barley, and ten of far (maize;) more or less, as the soil is rich or poor. The produce is in some places ten after one, but in others, as in Tuscany, fifteen after one." (*Lib. 1, cap. 44.*) This, in round numbers, is at the rate of twenty-one and thirty-two bushels an English acre. On the excellent lands of Leontinum, in Sicily, the produce, according to Cicero, was no more than from eight to ten for one. In Columella's time, when agriculture had declined, it was still less.

[*Loudon's Ency. of Agriculture.*]

HOPS.

MR. SKINNER,

While too much praise cannot be bestowed upon the attempt to introduce among our farmers new objects of attention and cultivation, yet on the other hand, care ought to be taken in our recommendations, not to hold out delusive hopes. The foregoing reflection occurred on reading some remarks in your number of Feb. 16th, under the head of "New objects for the attention of Maryland and Southern farmers," which served as an introduction to an article "on the cultivation of hops." In those remarks gloomy anticipations with respect to tobacco planters and the growers of grain, in states cultivated by the expensive labour of slaves, were freely, and I fear with too much truth, indulged; but in seeking for substitutes, we shall fall into an egregious error, if we suppose that hops can be resorted to in any considerable extent. Since the publication of the above mentioned article on hops, the writer of these observations has made inquiries respecting the consumption of that article in Baltimore; and the result is, that all the brewers in town do not probably use more than 40,000 lbs. a year—a quantity much less than half of what might be raised by any one out of many Prince George's planters, if as much labour were devoted to hops as is allotted to his tobacco crop, provided hirelings could be got at the season of harvest in sufficient numbers; which, however, would be utterly impossible except in the vicinity of cities. A very few individuals, thus situated, might therefore glut the market. It can, therefore, only be looked to as an object of garden cultivation in small quantities.

Another result of this inquiry was, that although hops are in some years of scarcity, from the precariousness of the crop, very high in price, yet the average price cannot be estimated above 15 cents per pound, and in some years they have been as low as 8 cents per pound. A man, who was formerly the principal hop grower in this city, stated, that he had never seen a hop grower in the neighbourhood of Baltimore, who was not a Quaker.

hood, he planted a small lot of hops; which, however, after a year or two, he ceased to gather, as he found that the expense of hirelings to pick them, amounted to more than the price of the same quantity of hops brought from New England. This can be easily comprehended, when it is understood that a smart, active hand, accustomed to pick hops, cannot gather more than enough, when dried, to make 15 lbs. per day—and the same hand, without experience, could not pick more than half that quantity. After the wages of hirelings, and the subsequent expense of curing the hops by fire (an operation of great nicety,) are deducted from the price of a day's gathering of hops, but little surplus will be left to pay for the expense of previous cultivation.

The public, however, are much indebted to you for giving the necessary information respecting the cultivation of hops; for I agree entirely with you, that "your notice of the subject will not have been without its use, if it only lead each farmer and planter to cultivate a dozen or two of vines to give hops enough for his own use—in making cheap and wholesome beer, to be drunk without stint, by all the family, in lieu of whiskey, which is selfishly provided for his own exclusive use and that of his male friends."

That your readers may have the opinion of British writers on the subject of hops, I enclose you for publication an extract from the 1st volume of the Edinburgh Encyclopædia, p. 301—and am

With much esteem and respect,

Your humble serv't,

A CONSTANT READER.

"Hops are a necessary article in brewing, but not advantageous in an agricultural point of view; because much manure is abstracted by them, while little or none is returned. They are an uncertain article of growth, often yielding large profits to the cultivator, and as often making an imperfect return, barely sufficient to defray the expenses of labour. In fact, hops are exposed to many more diseases than any other plant with which we are acquainted; and the trade affords a greater room for speculation than any other exercised within the British dominions.

"There can be no certain report made of the produce of the hop plantations: because in some years the growth is less than two hundred weight per acre, and in others it is fourteen or fifteen. The average may be seven or eight." [*Edin. Enc.*]

Extracts from the unpublished agricultural correspondence of G. W. JEFFREYS, of North Carolina, author of an excellent work, in duodecimo, entitled 'Agricultural Essays.'

AGRICULTURAL LIBRARY.

Philadelphia, Oct. 13, 1810

SIR—I have the pleasure to acknowledge the receipt of your letter of the 6th inst. and in answer to your request respecting an agricultural library, I have annexed a list of books which I think every such society ought to possess.

Domestic Encyclopedia. Philadelphia.
Archives of Useful Knowledge.
Bordley's Notes on Husbandry.
Mem. Philad. Agricultural Society.
Trans. Society Arts & Manufactures.
McMahon's Gardener.
Darwin's Phytology.
Dickson's Agriculture.
Tessier on Sheep.
Bard on Ditching.
Trans. Massachusetts Agricultural Society.
Bakewell on Worsted.

All the foregoing books are now in the possession of the Agricultural Library, and are at the disposal of the Society.

High street. I do not think that the works of Marshall or Young, or the Communications to the Board of Agriculture of England, will be of the least benefit to you; as they treat of local affairs principally, and are, moreover, very dear. I cannot recommend any book on the diseases of cattle. I have read every one that ever was published in English, and am disgusted with the absurdity and inhumanity of the practice they advise. In the northern states our cattle are, fortunately, healthy, if justice be done to them. In the southern states, the chief diseases they are subject to arise from shameful neglect and poverty; and until a planter makes up his mind to house his cattle in storms, and supply them with plenty of wholesome juicy food, it is better that he should not have medical books, as he will pester the animal with drenches instead of good hay, pumpkins, turnips, potatoes, and corn meal. In the winter of 1813, I gave a course of lectures on the diseases of domestic animals, with the hope of exciting the attention of the medical gentlemen to the subject; and I now send you the introductory lecture to that course. I will gladly receive any facts on the subject, as I hope the trustees of the University will establish a professorship of Veterinary Medicine, when I will furnish the person appointed, if desired, with the result of my researches on the subject.

Wishing you all imaginable success in your agricultural operations,

I remain very respectfully, your friend,
JAMES MEASE.

MR. G. W. JEFFRYS.

SOILING CATTLE.

Philadelphia, June 26, 1817.

SIR—If you soil cattle, attend to the directions in the Domestic Encyclopedia: oats and corn, cut green will not fatten cattle; but will keep cows in milk. Your dependence must be on white and red clover, orchard grass, Guinea grass, and avena clatior.—Timothy must be left for hay. Herd grass may also be added to the list for soiling. If you soil, much will depend upon rigid punctuality, cleanliness, daily carding the sides with a wool card; confiding the cattle to one person; and not over feeding. Wishing you success,

I remain respectfully yours,
JAMES MEASE.

MR. G. W. JEFFRYS.

P. S. Your cattle should regularly have a handful of salt once a week; and if soiled must be kept under sheds, and each in their own stall.

WINE MAKING.

LETTER FROM THE VENERABLE JOSEPH COOPER.

Cooper's Point, Aug. 9th, 1817.

FRIEND JEFFRYS,

I received your letter of 20th May last, but from age and its consequent infirmities, have been unable to answer its requests; therefore, must refer you to Dr. Mease's Archives of Useful Knowledge, except an improvement I have lately discovered of making the grape wine without sugar or water, which is better than any I have heretofore made, when of the same age. At the first trial I added about one third part of the sweetest unfermented apple juice; previous to the fermentation of either, put the liquor into a clean vessel for fermentation, filling it frequently to work out the filth. As soon as it emits a clear froth, check the fermentation by putting the bung in slack and tightening it as it will bear; rack it by letting it dribble slowly into a tub, to flatten it; add about a sixth part of good apple or French brandy; put it into a clean cask, and bung it slack. I generally rack it off three or four times the first winter, burning a sulphur match in the cask at each racking except the first.

The last experiment I tried was to let the grape

and apple juice ferment separately; have plenty of the latter, rack and spirit as before; and at a future racking mix them to suit the palate. After it is of a proper age, fine it with new milk; the last method I have tried. The above I have written with difficulty at near eighty-two years of age,

And remain yours, &c.

JOSEPH COOPER.

NOTICES OF PERNICIOUS AND UNPROFITABLE PLANTS,

Which infest the Farms in Chester county, Penn.

(Continued from page 398.)

No. 2.

TETRANDRIA.—MONOGYNIA.

Cephalanthus occidentalis. Button bush. Pond dog-wood.

This shrub prevails in swampy meadows, and along rivulets, so as to be a good deal troublesome to the farmer, in many places. It is to be kept down by careful grubbing and draining.

Dipsacus sylvestris. Wild teasel.

This foreigner was introduced into this county some forty or fifty years ago, and is gradually extending itself along our field sides. It is altogether a worthless plant, and calculated to be a nuisance, if neglected, but being a biennial, it may readily be subdued by proper care.

Plantago major. Common, or Great plantain. Way-bread.

A foreigner, and a worthless plant to the agriculturist; but as it is chiefly confined to path-ways and lots about houses, it is not found to be very troublesome or injurious.

Plantago lanceolata. English plantain. Ripple-grass. Rib-wort. Buck-horn plantain.

This, also, is a foreigner, and becoming very prevalent in our fields; so much so, that it is difficult to procure red clover seed entirely clear of it, in this county. It yields such an abundance of seed, that where it has once got possession of the soil, it seems almost impossible to get rid of it. It is, however, by no means a worthless plant; for horses, cattle and sheep are very fond of it, and it has even been cultivated by some farmers; but its presence is generally objected to.

Synlocarpus fetida. Swamp cabbage. Skunk-weed.

Frequent in our low, wet meadows, and altogether worthless; but not difficult to extirpate where pains are taken.

PENTANDRIA.—MONOGYNIA.

Lithospermum arvense. Stone-weed. Corn groom-well.

A worthless foreigner, which has become naturalized in our grass and grain fields. The mature plant seems to contain siliceous matter, which renders it injurious to scythes and sickles. It would probably not be difficult to subdue; but it has not, as yet, attracted much attention.

Echium vulgare. Viper's bugloss. Blue devils.

This vile foreign weed is very rare in Chester county; but it is frequent in the neighbouring parts of Maryland and Delaware, and will probably find its way among us ere long, if care be not taken to keep it out. It is considered a great nuisance where it prevails, and is said to be very difficult to conquer: it therefore behoves the farmers sedulously to guard against its further progress.

Rochelia Virginiana, Torrey. Virginian scorpion grass.

This is an obnoxious weed, frequent in open woodlands, and along fences, field-sides, &c. The bur-like fruit is particularly troublesome, by matting horses' manes, fleeces of sheep, &c.; and the plant ought to be kept down by cutting or pulling it up, before the fruit is formed.

Datura tatula. Jimson, or James-town weed. Thorn-apples.

A well known fetid weed, possessed of active narcotic properties, and very common about barn yards, lanes, waste grounds, &c. Very little care is taken to keep it in subjection, or it might readily be done, as it does not incline to spread over the farm. The *D. stramonium*, which some botanists consider as a distinct species, though it is certainly allied to the foregoing, has not been observed in Chester county.

Verbascum thapsus. Common mullein.

This is a foreigner, but completely naturalized, and very abundant on all farms where the occupant is not careful to keep it down. This may readily be done by attention and perseverance in pulling it out by the roots every year, before the seeds are matured; and none but slovenly farmers will ever permit so worthless a plant to occupy their grounds.

Verbascum blattaria. Moth mullein.

A worthless weed, and frequent in old fields and pastures; but not very troublesome, and has not attracted much attention.

(To be continued.)

HORTICULTURE.

CULTIVATION OF THE GRAPE.

MR. SKINNER,

Pendleton, Feb 17, 1827.

In obedience to the resolution of the United Agricultural Society of South Carolina, I herewith enclose for publication in the American Farmer, a copy of an original ecommunication read before that society at their meeting in December last, on the "cultivation of the grape," by Mr. N. Herbmont, of Columbia, S. Carolina.

JOSEPH N. WHITNER, Sec'y.

GENTLEMEN,

Columbia, Nov. 20, 1826.

The cultivation of the grape having been here lately the subject of much conversation, the great praise which my friends have bestowed on my wine, and the high sense I entertain of the vast benefits this country might derive from it, induced me to make a few calculations, to ascertain the most probable advantages that would be effected by spirited exertions in the cultivation of our pine lands in this valuable article. In doing this, it is proper to estimate the present value of these lands and that which they will have acquired by the plan proposed, not after a given number of years; for the time required to produce the full effect depends on so many circumstances, that it cannot be calculated with any degree of certainty, but must depend on the degree of our exertions, and the vigour with which the execution of the plan may be commenced and persevered in. However this may be, the success here contemplated, can scarcely fail to be the ultimate result.

We may assume for the above purpose, (and great accuracy is not of material importance in this case,) that the state of South Carolina contains sixteen millions of acres. It is thought that nearly one half of it is pine barrens, sand hills, and other pine lands—amounting, therefore, to eight millions. Out of this we must deduct about three millions of acres for the water-courses and our rich swamps bordering upon them, and a small quantity of the best quality of pine lands, which I presume is a full allowance. Five millions are then left of poor sand hills and pine barrens. The present value of this land cannot be precisely ascertained; but it is well known that thousands of acres can be bought at from ten to fifty cents per acre. I think we may safely say the average value is not more than fifty cents. It makes then \$2,500,000. If this allowance is too small, doubling it will make no great difference in the result of the calculation.

The value of lands planted in vines in Europe, particularly in France, is known to be very great, viz: from \$500 to \$5000 per acre; and a vineyard of seven acres is known to have been sold, not long since, for considerably more than the latter price. Experiments in Georgia, in this state, and elsewhere, have shown, that we can reasonably calculate on an average crop of 300 gallons of wine per acre—and this is more within the control of the cultivator than is generally supposed.

From these premises, it must be thought extremely low to estimate lands planted here in vines and in a bearing state, at \$500 per acre.

Surely this will not be considered extravagant, when the clear yearly profit of such an acre may be worth as much as the fee simple is here estimated. Supposing one acre only for every fifty to be in vines; the value of the lands in this culture will then be 100,000 acres at \$500 per acre—\$50,000,000. But can we suppose that proprietors of such lands, having experienced the value of such cultivation, would be satisfied with only one acre in fifty. We must suppose double the quantity a very moderate estimate, which will make the land thus cultivated, be worth for 200,000 acres of it, \$100,000,000.

It cannot be supposed that the remaining four million eight hundred thousand acres, a great proportion of which is susceptible of so much increased value, can possibly remain at the former price of fifty cents per acre; and under the contemplated circumstances, an increase to at least \$2 per acre must be a very moderate calculation.

Therefore, 200,000 acres in vines, at \$500, make	\$100,000,000
4,800,000 uncultivated, or cultivated in any thing else, at \$2,	9,000,000

Total value of pine lands in the state at that time,	\$109,000,000
Former, or present value, deducted,	2,500,000

Leaves a difference, or increased value, of	\$106,500,000
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This amount, then, is the bare increase in the value of the land. Now let us see the amount of yearly income produced by the land.

We have assumed an average crop of 300 gallons per acre. Let us even reduce this to one half, 150 gallons at \$1.00—150 dollars per acre will make for 200,000 acres, \$30,000,000 per annum. (In Europe, some of the vineyards yield sometimes even more than two thousand gallons per acre; this, however, is rare, and must be on land of very great fertility.) I allow nothing for the produce of the rest of the land, although this may be very great, as probably a few other valuable articles will keep pace with the culture of the vine—such as silk, which may be raised in the mean time in very considerable quantities, without interfering at all with the principal object; for these two, viz: wine and silk, do very well together.

It must be remembered that the above need not in the least, or in a very small degree, affect the cultivation of the present staple products of this state; and that what is here proposed, is purely to be an increased value caused by the cultivation of new articles in a soil, not otherwise available—and this to be done, or at least begun, chiefly by suitable persons brought from Europe.

There France, Italy and Germany can yield to us thousands of honest, industrious, and willing cultivators.

Let not the above be too hastily pronounced visionary. Let us remember that we have never been inferior to Europe in any of our undertakings; we have even exceeded them in several, and the produce of the vineyards in France alone exceeds the above amount.

The advantages anticipated here are, however, not

the only ones to be expected from the adoption of a system calculated to produce the result. They are pecuniary only, and they will necessarily be accompanied by an immense augmentation of physical power in the state, and consequent weight in the scales of the Union of the states, and respectability abroad. "Those extensive tracts of sandy soil are found congenial to the vine, and, like the same soils in the south of Europe, where health reigns perennial, yield those mild tonic wines so friendly to health, temperance and prosperity." Our moral condition will then be much improved, and the advantages resulting from this are truly incalculable.

With all these prospects before us, shall we remain in passive indolence when we have so many motives to urge us on; motives, several of which have not been even hinted at in this paper?

Will not our legislature, will not spirited and patriotic individuals, lend a helping hand to promote such desirable consequences? I fear it will be said, let the thing take its own course—let it rest on individual exertions; and many plausible and fashionable arguments will be used, to show that governments ought not to meddle with things of this nature. To this I answer, that if the prosperity of nations and states be not the business of governments, I do not know what governments are instituted for. Consult history, the best guide of nations and communities, and you will find that if the governments of Europe had always acted under the influence of such doctrines, there would probably not be yet one pound of silk raised in all Europe, nor perhaps the one thousandth part of the wines now raised in that country. The government of the United States has not thought it derogatory at the last session of Congress, to interest itself in the cultivation of silk, and has begun measures to promote it. It is a most valuable article; but its importance is not to be compared with that principally recommended here and with which it is easily, I was going to say naturally, connected.

If it be thought that we have somewhat travelled through some of the regions of Utopia, it will be readily admitted, if it be merely meant that the efforts which may be made towards the attainment of the result here anticipated, can be literally expected. We must admit that a variety of circumstances will necessarily change them.

In this, as in every thing else, the effect must be proportionate to the cause; and something like the anticipations here above enumerated, must take place according to the adequateness of the means.

I am, gentlemen, very respectfully,

Your obed't serv't,

N. HERBEMONT.

THE SILK CULTURE.

[The interest we feel in the culture of silk in America, to which the public attention has been attracted by Mr. Miner's resolutions; forbids us to omit the following correspondence. It will be referred to, hereafter, as belonging to the history of an important branch of national industry. A good deal of wholesome excitement already exists on the subject. Great pains have been taken by Mr. Rush to collect information for a perfect report, which we shall have next fall or winter. Some pounds of Italian mulberry seed were distributed by Mr. Miner during the late session of Congress, among the gentlemen from the south and west, and strong hopes are entertained, that in twenty years we shall export silk.]

House of Representatives, Feb. 13, 1827.

The Hon. RICHARD RUSH.

Secretary of the Treasury.

SIR—Numerous applications are made to me to know whether a report on the Mulberry and Silk Worm, with a view to the production of silk, called for by a resolution of the last session of Congress,

has been made, and if not, whether it may be expected at the present session. May I ask the favour of a note in reply, with leave to communicate it for the satisfaction of those who take an interest in the subject?

With the most perfect respect,
I am your obedient servant,
CHARLES MINER.

Treasury Department, Feb. 19, 1827.

SIR—I received, on Saturday, your letter of the 13th instant, and beg to say, in reply to it, that the Report on the resolution of last May, relative to the culture of silk, will not be made at the present session of Congress. The subject commanded my particular, and early attention, after the close of the last session, and measures were adopted for obtaining, not only from all parts of the Union, but also from different parts of Europe, such information, in the form of publications, or otherwise, as might constitute the proper materials of a report. From the shortness of the recess, the returns of this information had not even come in, except in part, at the commencement of the present session; and further information may still be expected. The task of having the whole mass digested and arranged in a proper manner, will be entered upon after the close of the present session, and a hope is entertained, that it will be in a state to be presented to Congress at an early period of the next session. I deemed this course more likely to meet the true objects and spirit of the resolution, than if a report had been made hastily, which, from the scope that the subject was found to have, could only have been done at the expense of the requisite fulness; and I feel happy in believing, from the tenor of our conversations, that you will be disposed to view, with approbation, the course adopted.

I remain, with great respect, your obed't servant,
RICHARD RUSH.

The Hon. CHAS. MINER,
Of the House of Representatives of the U. S.

HORTICULTURAL ITEMS,

From London's Gardeners' Magazine for 1826.

Naturalization of Plants.—A German author, J. Ch. Lewchs, has lately published a book, in which are some useful remarks on this subject. His work is divided into three parts. 1st. Observations on the climate and soil of Germany, and those of other countries. 2d. Principles of guidance in choosing plants for acclimating; and, 3d. Processes for that purpose.

In choosing plants to acclimate, it is necessary to attend first to their organization; annual plants which terminate their development in a part of the year, are easier acclimated than perennials. Plants which abound in sap and have a spongy porous wood and pith, succeed with difficulty. In applying these principles, the author lays it down as a rule, that instead of endeavouring to give to foreign plants their ancient climate, we ought to apply ourselves to make them forget it. He recommends to begin by hardening the seed, and for that purpose to put it in the ground before winter; to shorten the period of vegetation by increasing the temperature; to diminish the nourishment, but increase its irritation, by employing stimulating saline manures, camphor, &c.; to stop the growth in autumn, by surrounding the plant with cold; to hinder it from shooting too freely in the spring, by keeping it dry, so as to diminish the quantity of water absorbed by the roots, &c.—*Gard. Mag.*

Means of rendering Promology more flourishing. The Promological Society at Guben, in Lusatia, having been consulted on this subject, recommended the adoption of the following measures. 1. Instruct youth in the cultivation of fruit trees. 2. Instruct also ministers and school masters. 3. Oblige

ministers and school masters to acquire information on the subject. 4. Render ministers and school masters responsible for public ordinances relative to the culture of fruit trees. 5. Establish branch promological societies. 6. Establish a nursery and an orchard for the principal society. 7. Plant fruit trees in the public places of villages and along the high roads. 8. Let every parish (commune,) be responsible for fruit trees planted in public places. 9. Appoint public watchmen for fruit trees. 10. Increase the penalties for injuring fruit trees. 11. Prohibit the destruction of small birds, which are necessary for the destruction of caterpillars; but the sparrow is to be excepted, because it attacks both birds and fruits, and only eats caterpillars when it cannot get any thing else. 12. Establish public officers to superintend the execution of promological laws, and judge petty offenders. 13. Name an inspector general for promological plantations for each province. Such is the ardor for encouraging the growth of fruit trees on the banks of the Rhine. *Gard. Mag.*

Beurré-Delbecq.—This is a new autumn pear, raised by M. Van Mons, from seed sown about thirteen years ago; it is named after the editor of a public journal, (*Messag. des Sci. et Arts.*) ripens in autumn, and is said to be a very superior fruit. The tree is loftier, and of a handsomer form than any other variety.—*Bull. Univ., March, 1826.*

Myrica Cerifera.—This plant has been cultivated for seven years, in the open ground of the Botanic Garden of Karlsruhe; it there ripens its fruit, five pounds of which will furnish by decoction upwards of 8 ounces of green wax.

Extraordinary utility of the Nettle.—In the weekly newspaper of the Bavarian Agricultural Society, 1823, No. 6, the nettle is said to have the following properties: 1. Eaten in salad, it cures consumption. 2. It fattens horned cattle, whether eaten green or dried. 3. Experience not only shows that it fattens calves, but improves their breed. 4. It is an antidote to most maladies. 5. Sheep which eat it, bring forth healthy, vigorous lambs. 6. It promotes the laying of eggs in hens. 7. It improves the fat of pigs. 8. The seed, mixed with oats, are excellent for horses. 9. It grows all the year round, even in the coldest weather. 10. The fibres of the stem make an excellent hemp.

The Bavarian oracle might have added, that few plants force better or more rapidly, and that the tender shoots so produced, make a delicate and high-flavoured pot-herb, resembling the points of the shoots of pumpions.

It is certain the nettle is much valued in Holland, where its young shoots are used as a pot-herb, its roots for dyeing yellow; where the horse dealers give the seeds to horses, to make them brisk and give them a fine skin; and where considerable portions of fields are planted with it, and mown five or six times a year, as green food.—*Gard. Mag.*

Cultivation without dung.—M. Corvaille, of Toulouse, has published a pamphlet, in part a translation from the Italian, to show that this may be effected by burying in the soil half grown crops. He gives an example of a field in Piedmont, which was divided in two equal parts; on one of these rye, sown in November, was ploughed down on the 1st of May following; at the same time the other was well manured with stable dung. Both were sown with maize, and treated with the same care. At harvest, the produce of the grown crop on the ploughed-down rye, exceeded that grown on the dung in the proportion of 425 to 300. M. Jourbert, of Turin, who made this experiment, thinks rye the best of all plants for ploughing in: but it does not follow, from the above experiment, that burying living vegetables is to be preferred to manuring, because the effects of the latter lasts three or four years, while that of ploughing-in growing plants is seldom perceptible on a second crop. We have no

doubt, however, that if the poorest land had such crops as were grown upon it ploughed down when they were half arrived at maturity, for a series of years in succession, it would in the end become rich. But how many years it would require to effect this, is uncertain.—*Gard. Mag.*

[One truth should never be lost sight of by the farmer, that the growth of plants, like the growth of animals, will ever depend on their being supplied with a sufficient quantity of food, adapted to their wants; that is, of those matters which are to constitute the elements of the new plant. Rye is a better green crop than buckwheat; but I think it affords less nutriment than clover, and I am certain that it affords less than a dressing of stable dung. In the case above cited, the green crop was soon decomposed, and gave all its food to the maize; while the manure, more ligneous, slower in decomposing, and probably checked in the fermenting process by a cold season, or cold and wet soil, gave probably but a small part. The crop that followed the maize must have been far superior on the dunged ground.]

Brighton Athenæum and Oriental Garden.—The principal objects of this institution are the following: 1. An extensive collection of exotic plants enclosed in a glazed conservatory. 2. A library of standard works in literature and science; museum of natural history, &c. &c.

The Oriental Garden.—This name has been chosen from the adaptation of the place to the growth of tropical plants. The building will be of oriental character, entirely of glass, supported by iron work of a peculiar construction; which, while it possesses the requisite strength for covering so vast a space, is delicate enough to admit the light with perfect freedom. It will include about an acre of ground; and under this magnificent canopy, the finest and most beautiful plants may be grown in all the perfection of their native soil and climate.—*Gard. Mag.*

British Wines.—The Caledonian Horticultural Society has always paid attention to the subject of home-made wines. Thirty-seven varieties were presented to them for examination, at their late meeting. The qualities of the wines seem to have improved materially from year to year, not only in the Champagne, both still and mousseux, from the unripe gooseberry becoming more and more palatable, but various attempts at imitating the drier continental wines have succeeded beyond expectation. The committee recommend competitors, to follow as nearly as possible the mode practised by Mrs. Roberts, and described at length in the *Memoirs of the Society*, vol. iii., p. 460. The following recipe is from this family:

"I have but one general rule for making every kind of garden wine. I put one half pound of water to every pound of fruit; bruise them well together and continue to mix them twice or thrice a day. I use the saccharometer and weigh a small quantity of liquor after every operation. The increase of gravity is regularly noted down; for as long as saccharine matter is contained in the husks, the gravity will increase. When this is exhausted, a decrease of saccharine matter will be observed by a decreased specific gravity at the next trial, showing that such matter begins to be decomposed. It is then strained from the husks into a cask without a head, for fermentation; which cask is sufficiently large to contain double the quantity required. The average quantity of sugar I use, is two pounds loaf, powdered fine, to every gallon of impressed juice, put in with the juice in the cask. This fermentation is allowed to continue till it has attenuated 30 or 40 per cent., helping the operation by adding a small quantity of yeast at the first, and afterwards skimming and stirring it at least once a day. It is then transferred into the barrel for final fermentation, (filling it up twice a day with its own liquor,

kept for this purpose,) and allowed to remain unbunged till all visible fermentation has ceased. I again weigh a sample, and find a further attenuation of 10 or 15 per cent. It is then racked from its lees into another cask, and the lees run through a filtering bag. The proportion of spirits used is one-twelfth, put in at three rackings, one third at each.

"With regard to the saccharometer, I am of opinion, that if it were in general use, the character of home-made wine would be greatly improved; and that it is impossible, without its aid, to make, from year to year, a regular and well manufactured wine. The seasons in this climate are so precarious, that the fruit in some years will yield, at the least, one quarter more saccharine matter than in others; and by following the generality of recipes in favourable seasons, we shall have a rich, well tasted, excellent wine; in others, (although adhering to the same methods,) a thin and greatly inferior wine. By using this instrument, we find in bad seasons the deficiency of gravity; in good seasons, the increase. The known evil can be easily remedied by an extra quantity of unadulterated juice, sufficient to bring up the gravity as high as we find by experience is requisite. We all of us, I am convinced, greatly err in using too much sugar; and were we to bring up our gravities by an extra quantity of fruit, sugar might, perhaps, be completely dispensed with. Home-made wines would, in every respect, resemble foreign, and be far superior to what they now are.

"I have found the average specific gravity of home-made wines, when a twelve month old, to be from 50 to 50. Whereas a well manufactured wine will never exceed the weight of water; as is the case with all foreign wines. The last specific gravity before fermentation I adopt, averages 120 Allan's instrument.

"The instrument is expensive, certainly, when purchased merely for this use; but, if the method appears to you desirable, I have no doubt Mr. Allan could make an instrument of glass, for ten or twelve shillings, which would answer the purpose very well, if the use of it were fully explained to him.—*Gard. Mag.*

TEA PLANT.

Linnean Botanic Garden, near New York, Feb. 3, 1827.

Sir,—Perceiving various communications from time to time in your excellent publication, relative to the Tea Plant; I have thought it well to inform the public that I have about a hundred fine flowering plants, of both the Green Tea or *Thea viridis*, and of the Black Tea or *Thea Bohea*—also plants of the *Camellia sasanqua*, which forms part of the manufactured green teas; and of the *Olea fragrans* whose very odoriferous flowers are used in conjunction with those of the *Aglaia odorata*, and *Viola odorata*, to perfume all the finer descriptions of tea. I have also in my collection the *Leptospermum scoparium* or New Zealand tea; the *Ilex cassine* or Yapan tea of North Carolina, and the *Rhamnus thezans* of China. I anticipate shortly making you a more extensive communication on this and other subjects of interest to our country.

Yours most respectfully,
J. S. SKINNER, Esq.

WM. PRINCE.

STRAWBERRIES.

John Williams, Esq., of Pimaston, near Worcester, cultivates strawberries on small ridges of earth running north and south, about nine inches above the level of the ground, planting the strawberries on the top, and laying plain tiles on each side of ridge. He finds the produce earlier, more abundant, and better flavoured, than on plants grown on the flat ground. The flat tiles retain the moisture, promote the ripening of the fruit, and keep it from dirt after heavy showers of rain.—*Gard.*

LADIES' DEPARTMENT.

HOW TO CHOOSE A GOOD HUSBAND.

When you see a young man of modest, respectful, retiring manners, not given to pride, to vanity, or flattery, he will make a good husband; for he will be the same kind man towards his wife after marriage, that he was before it.

When you see a young man of frugal and industrious habits, no "fortune hunter," but who would take a wife for the value of herself, and not for the sake of her wealth, that man will make a good husband, for his affection will not decrease, neither will he bring himself or his partner to poverty and want.

When you see a young man, whose manners are of the boisterous and disgusting kind, with "brass" enough to carry him any where, and vanity enough to make him think every one inferior to himself—don't marry him, girls, he will not make a good husband.

When you see a young man, who is using his best endeavours to raise himself from obscurity to credit, character, and affluence, by his own merits, marry him; he will make a good husband, and one worth having.

When you see a young man depending solely for his reputation and standing in society, upon the wealth of his father or other relations—don't marry him, for goodness' sake; he will make a poor husband.

When you see a young man one half of his time employed in adorning his person, or riding through the streets in gigs, who leaves his debts unpaid, although frequently demanded—never, never do you marry him; for he will in every respect make a bad husband.

When you see a young man who never engages in any affrays or quarrels by day, nor follies by night, and whose general conduct is not of so mean a character as to make him wish to conceal his name; who does not keep low company, gamble, nor break the Sabbath, nor use profane language, but whose face is seen regularly at church, where he ought to be—he will certainly make a good husband.

When a young man, who is below you in wealth, offers you marriage, don't deem it a disgrace, but look into his character; and if you find it correspond with these directions, take him, and you will get a good husband.

Never make money an object of marriage; for if you do, depend upon it, as a balance for the good, you will get a bad husband.

When you see a young man, who is attentive and kind to his sisters, or aged mother; who is not ashamed to be seen in the streets with the woman who gave him birth and nursed him, supporting her weak and tottering frame upon his arm, and who will attend to all her little wants with filial love, affection and tenderness—take him, girls, who can get him; no matter what his circumstances in life, he is truly worth the winning, and will in certainty make a good husband.

Lastly, always examine into character, conduct and motives, and when you find these good qualities in a young man, then may you be sure he will make a good husband.

THE WIDOW.

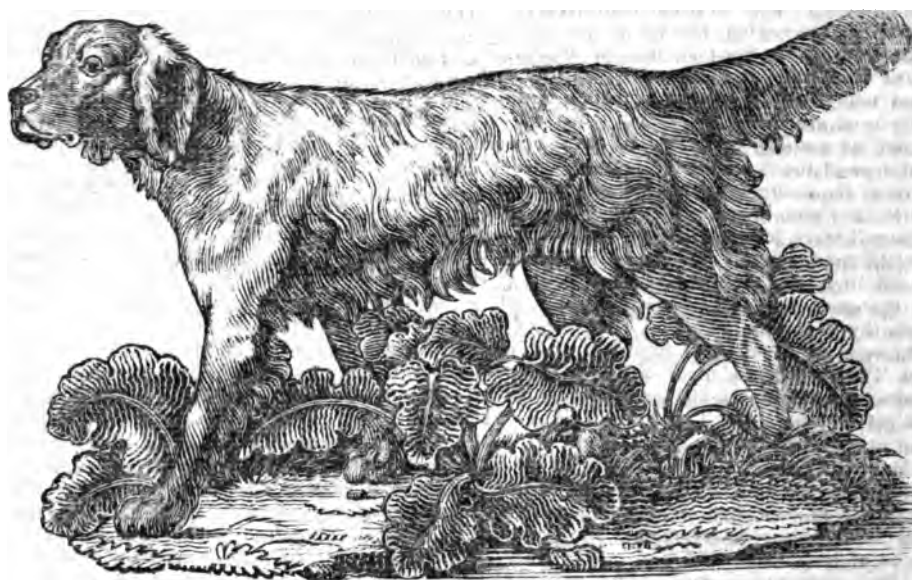
I perceived her as she slowly turned the corner of the street to stop and wipe away the tears that were fast coursing each other down her feeble cheek, and my heart took an interest in her affliction; though I knew not the cause. I followed her, unnoticed, to her humble habitation. I saw her enter, and heard her bestow a benediction on three shivering infants, who hailed her return with cla-

morous joy. She divided among them the scanty portion of food which her day's labour had been able to procure, and I saw her turn away and weep in silence that it was so little. I resolved to inquire her history, for she appeared like one who had seen better days. She had entered life with fair prospects; had married early, and lost a husband whom she had tenderly loved; he had been unfortunate in his business, and at his death was unable to leave her an adequate support for herself and three children; misfortunes had continued to pursue her. She had talents, but ill health and poverty prevented her exercising them. She had industry, but could find little to employ it. She called at the houses of the rich, but they "could not afford to employ her;" she was too delicate for hard labour, and her feelings were too refined to allow of her being importunate. She bore her sorrows, her privations, her hardships, and the mortifications attendant on a condition like hers, in silence. The friends of her prosperity had forgotten her in her misfortunes; she had nothing to attach her to life except those desolate infants—for their sake she tried to support her miseries, and to struggle on yet a little longer. The

thoughts of leaving them exposed to a world which she had found so pitiless, sometimes shook her fortitude; her religion would then come to her aid, and she remembered that they had a Father in Heaven, and she knew that "God tempers the wind to the shorn lamb." This was the account I had of her; it is unnecessary to add that I was deeply interested: it is no tale of fiction. There are thousands such in this land of liberty, peace and plenty. In this refined and enlightened age, talents are neglected, industry too frequently discouraged, virtue unnoticed, and pride and riches alone triumphant. I have often reflected on the happiness it would have afforded me, if Heaven had blest me with the means to seek out neglected merit, to encourage virtuous industry, to show my respect to talents, though obscured by poverty, and to speak consolation to the delicate and sensitive heart, when labouring under wrongs, which "patient merit of the unworthy takes." It galls me to think that vulgar importunity, and unblushing effrontery, too often obtain that notice and support, which modest merit sighs for in silence and in vain.

HARRIET.

SPORTING OLIO.



THE SETTER.

The Setter was originally a Spaniel, perhaps of the larger kind, taught to sit or couch on scenting the game, as the Hound was subsequently taught to stand or point, in the similar circumstance. Had we not the testimony of history, the deep fleg and external form of the Setter, even when highly crossed with the Pointer, according to modern fashion, fully demonstrate his origin. A Duke of Northumberland of the fourteenth century, has the reputation of being the first sportsman who broke and trained the Setting dog to the net. In the year 1685, a yeoman of the name of John Harris, of Willodon, in the parish of Hastlebury, county of Worcester, executed a deed signed by his mark, to Henry Herbert, of Robbesford, said county, Esquire, in consideration of ten shillings of lawful English money, well and sufficiently to maintain and keep, until the first day of March, for the said Henry Herbert, a Spaniel bitch named Quaud, and fully and effectually train up and teach the said bitch to set partridges, pheasants and other game, as well and exactly, as the best sitting dogs usually set the same. Mr. Daniel has copied at length this curious instrument. Setters in Ireland, are, or used to be, termed English Spaniels. Mr. Thornhill

thus describes the crack Setters in that country;—colours deep chestnut and white, or all red, with the nose and roof of the mouth black. In general, Setters partake of the variety of colours in the Spaniel and Pointer. On the same authority, we learn that the Hibernian sportsmen are in the habit of giving very liberal prices for the best kinds of this dog: as a proof, a gentleman in the north of Ireland, gave to his tenant for a Setter dog and bitch, the renewal of a lease of a farm for nine hundred and ninety nine years, which farm, had the lease expired, would have cleared to the landlord, above two hundred and fifty pounds per annum. In this case, it is but fair that, we be allowed to presume some additional and valuable consideration. Extraordinary high prices for Setters, in England, have not hitherto come under our notice; and we believe at the present time, a very good Setter may be purchased for ten pounds. Yet Setters, however extremely useful, and preferred by many sportsmen, are by no means so numerous as Pointers, the latter breed being the greatest favourites of the day.

The Setter is a very beautiful and engaging dog, and the more so in proportion to retaining his original breed and form, and being free from the

Pointer cross. His eye and countenance have all the softness of the Spaniel, and when of good size, with his soft, deep, and curly flew, and long fringed tail, he makes a charming and enticing appearance in the field. It is difficult however, at present, to find a true Setter, so much has the original breed been mixed with the Pointer; perhaps the breed may have been preserved more pure in Ireland. The field duties of the Setter and Pointer are the same, but the former is more active, hardy, and spirited, fearing no ground, wet or dry, nor the thickest covers, his feet being narrow, hard, and well defended by hair. He is well fitted for moor and heath, and no day is too long for his unwearied activity and courage. He is said to be sometimes given to strange antipathies, caprices, and self-will, in his hunting, of which Mr. Daniel gives a singular instance. The narrowness of his loin is perhaps to be found in many Spaniels, and does not seem to detract from his stoutness in the field; should this peculiarity require a remedy, it must be sought in attention to that respect in breeding. As to the offensive discharge from the ears so common to Spaniels and Setters, if it be not prevented by cooling purges, accompanied with proper external applications; but suffered to acquire that inveteracy which we often witness in old dogs, the best remedy, and far the least painful, in the long run, to the animal, is the excision of almost the whole of the ears, and suffering them to bleed considerably.—When external application can be of use, drying washes and ointments, of which the *mel Egyptiacum* is the basis, may prove most successful, internally not being neglected: of these last, sulphurated water continued for a time, with a few occasional doses of calomel, are the medicines most worthy of dependence.

It has been disputed, very uselessly, whether the Setter or Pointer have the most powerful nose; but let a sportsman take a thorough good dog of either kind, into the field, and he will no longer trouble himself with that dispute. Beyond a doubt, the Setter is the most useful gun dog of the two; but the Pointer is the largest, most stately and shewy, and is admired for his rate, his high ranging and steadiness. The Setter on his part, may put in his claim, and more especially, when of the pure breed, to his full share of the intelligence, sagacity and affection for man, which shines so eminently and so delightfully in the Spaniel.

The two breeds being of similar use and qualification, an anecdote of either will not be out of place. In the Sporting Magazine for June, 1811, there is a portrait of a Pointer named Basto, the property of — Mildred, Esq. of Walton upon Thames. This dog was got by Mr. Rydes' Basto, out of a famous bitch called Romp. He was a naturally staunch and thoroughly trained young dog, and had the peculiar qualification of bringing his game from water, as well as land. This peculiarity was an inducement to make the quotation, since the Pointer in general is not very ready to take water, and more especially if he be of the fashionable smooth haired cross, of which Basto by his portrait seems a prominent specimen: indeed the picture may almost as well be taken for a Fox Hound as a Pointer. The old Setter would take water very readily, and we have often seen Setters used in the amusement of *moor hen* shooting in moats and ponds.

Many sportsmen prefer the Setter to the Pointer, for pheasant shooting, as more active and hardy, having so much of the quality of the Spaniel, and thence not flinching at the thickest coverts. On the moors and for grouse shooting also, the preference of the Setter is decisive, for although he is said to require much water, and to be unable to endure heat and thirst like the Pointer; the former, from his constitutional activity, and the hardness of his feet, is superior in a long day, over a rough and uneven surface. From accident, or from that ne-

ver failing desire of shining by the intermixture of breeds, with little consideration of the end, Pointers have been crossed with Setters, and Setters with Pointers; but we have not observed the beneficial result. On the score of utility, the Setter can derive no improvement from such a cross; and granting, which however is not proved, that the Pointer gains something in regard of usefulness, such advantage will be counterbalanced by an abatement of size, figure, and stateliness, on which account only, perhaps, he superseded the Setter in the affections of the sportsman. Many instances have been related of the unwearied activity and stoutness of the Setter, whilst following his master travelling on horseback: this dog will hunt all the fields adjoining the road, during the journey, whilst a Pointer, in the same circumstances, will generally stick close and unconcernedly at the horse's heels. The late well known Mr. Elwes affirmed that one of his famous breed of Setters, in following him to town, hunted all the road side fields during a journey of sixty miles. Another anecdote, of a *rum* complexion, is detailed of a Setter bitch, called Dido, the property of the late Dr. Hugh Smith, of London, who was much attached to the sports of the field. Dido, it seems, following the Doctor into the country, happened to meet with a little ugly cur dog, in a village upon the road, fell in love with him, and that which was far more surprising, never afterwards forgot it. The Doctor, indignant at the advances of such a pitebian cur, to his high-born bitch, instantly drew a pistol and shot the offender dead. The whole of the bitch's love affair, as how she retained to her dying day, an inviolable attachment to her first murdered lover, and however subsequently matched, she resolutely and spitefully determined never to produce any but cur whelps, is circumstantially related by our writers; to whose minds, fully engrossed by the lovely part of the subject, it seems never to have occurred that, Smith in shooting the dog of another person, and by that person, perhaps, equally valued, as his own bitch by him, had committed a gross and unpardonable act of despotism.

We have observed that a Setter was originally a Spaniel taught to set, or couch, on scent of game; but although the land Spaniel was always preferred for the purpose, yet in former days, any dogs that would hunt, being "strong and nimble rangers, with wanton tails and busy nostrils," were taught to set; among these were mongrels between *land* and *water* Spaniels, *shallow flegged hounds*, *tumblers*, *lurchers*, and small bastard mastiffs. The training these dogs commenced at six, and even as early as four months old, which chiefly consisted in teaching the dog to lead in a line and collar, following close at the breaker's heels, and to couch, or lie down close to the ground, his distinguishing attitude.

[Sportsman's Rep.]

EDITORIAL CORRESPONDENCE.

EXTRACT—INQUIRY.

"Let me ask you if, through the medium of the Farmer, you can furnish the most approved method of making *good barrelled Pork and Beef*. The whole process, including the quantity of salt to the barrel or 100lbs.; the proportion of salt petre; if the meat is immediately barrelled up, or has it a previous salting, and how done?"

[We hope the foregoing will meet with a ready answer.]

ON IMPORTING SEEDS AND PLANTS.

"I wish to draw your attention to the enclosed. Could you print a dozen copies, and place them in the hands of our captains and supercargoes who visit the Pacific? I am but a lame geographer; yet will also draw your attention to the celebrated pines of Norfolk island, near to New South Wales. Our

India ships might bring in seeds and plants of that most valuable wood, the Teak. It might grow in Florida, if not in Maryland. I do think that you would not feel the expense, or regret the trouble, if you would prepare two duodecimo leaves, with a list of what you wish for, and short directions for the preservation of seeds and plants. Place a copy in the hands of our naval officers, and on board our merchant ships, on strong, firm paper."

[We would do it with pleasure if our correspondent would make out the list. We take this opportunity to request some friend in South Carolina, to send us a copy or two of the little pamphlet, published by the Agricultural Society there, containing a list of such things as they wished to be imported for experiment.]

THE FARMER.

BALTIMORE, FRIDAY, MARCH 9, 1827.

Our subscribers are respectfully reminded, that the *next* number will be the last of this volume. It will be speedily followed by the index and title page, to complete it for the binder.

For the *next* volume, there will be no lack of interesting materials for the several departments; and we can assure our patrons, that there will be no lack of exertion on the part of the Editor to justify their confidence and good will. His friends are respectfully requested to use their influence to increase the circulation of his journal; so far, at least, as to counterbalance the names that may be withdrawn at the end of the year.

HONOURABLE!—We received last week a letter from a gentleman, of which the following is a literal copy. It struck us as a model, in its way, for plainness, brevity and honesty!

Sir, Warrenton, Feb. 26, 1827.
Enclosed you will find ten dollars, which I believe is the full amount due you for the American Farmer. You will please discontinue my name on your list as one of your subscribers; I am too poor to pay punctually, and wish no man to spend his money in ink, paper, and the hire of Printer, for nothing.
Yours, &c. E. E.

RINALDO.—Proposals will be received for taking this valuable horse by the season, for a certain sum, to be paid after the expiration of the season. The testimony of some of the best judges can be given, to show that a finer horse was never offered to the publick use in this state. He is of a beautiful bay colour, 5 years old last spring—got by SIR ARCHY out of Miss Ryland by Gracchus—Duette, by Silvertail, full bred son of Clockfast; Vanity, Celer, Mark Anthony; Jolly Roger.

AMERICAN ECLIPSE.

MR. SKINNER, Balt. March 5, 1827.
You are requested to say in your very useful paper, that the great racer, "AMERICAN ECLIPSE," of New York, will stand for mares the ensuing season, at the stable of Mr. William Towns, in Boydtown, Mecklenburg county, Va.; where good pasturage is secured for mares sent from a distance. The owners of the horse have, in addition to the groom, sent on a competent person to take charge of the business of the horse, and keep a record of the pedigrees of the mares. Very particular care will be taken of mares; but no liability for accidents or escapes.
J. H. W.

LITERARY.—We call the attention of our readers to the following notice of a valuable literary publication: *THE CASSET; or Flowers of Literature, Wit and Sentiment*; published at Philadelphia, by Atkinson & Alexander.

This is a monthly publication, got up in a superior manner, at great expense, every number of which contains *forty* large octavo pages, printed well, on small handsome type, upon the finest paper, stitched and covered, accompanied with a table of contents, and furnished at the low price of *two dollars and fifty cents* per annum, *in advance*. The work is enriched with the choicest original and selected literary productions of our own and foreign countries; and in addition to the recommendation of neatness in its general appearance, and particular attention to the typographical execution, each number of the Casket is embellished with *three* handsome engravings, from the hands of some of the most distinguished native artists. The numbers already published contain—

January—An excellent likeness of the late John Adams, by Longacre—a View of Fair Mount Water Works, near Philadelphia—and Nos. 1, 2, 3 and 4 of the "School of Flora," with cuts.

February—A View of the Capitol at Harrisburg, Pa.—a spirited engraving of the Passaic Falls near Patterson, N. J.—a Front View of a Kitchen, Grate, Crane, &c.—and Nos. 5, 6, 7 and 8 of the "School of Flora."

March—A likeness of John C. Calhoun, Vice President of the United States, by Longacre—a View of the Catskill Mountain House, at the Pine Orchard—Nos. 9, 10, 11 and 12 of the "School of Flora"—and a new Ballad, by Thomas Moore, Esq. called "To-day, dearest, is ours," set to music.

The *April* number will contain Views of the Port of Buffalo—the Elm Tree under which Penn's treaty was formed, taken at Kensington, with a distant prospect of Philadelphia—Nos. 13, 14, 15 and 16 of the "School of Flora"—and the popular song of "I've been Roaming," set to music, as sung by Mrs. Knight.

In the month of April will be commenced in this work, the publication of the *prize essays*, for which premiums have been offered by the editors of the Saturday Evening Post.

At the end of the year, subscribers to the Casket, which will form a volume of near *five hundred pages*, and contain upwards of *thirty engravings*, besides music, &c. will be furnished with an elegant and appropriate engraved title page, and general table of contents.

With these claims to patronage, the "Casket" will, as has been previously mentioned, be afforded to those who subscribe for *that paper exclusively*, at the low price of \$2.50 per year; a subscription which it is confidently believed, is much lower than that for any other publication of a similar character in the United States—but to the subscribers of "The Saturday Evening Post" "The Casket" will be furnished for \$2 only.

LINNEAN BOTANIC GARDEN AND NURSERY,

(Long Island, near New York.)

WILLIAM PRINCE, proprietor of the above establishment, so well known for its great extent, and for the accuracy maintained in the execution of orders, offers to the public such Fruit and Ornamental Trees, Shrubs and Plants, as they may desire. The collection of Fruit Trees, of all the various kinds, is equal to any in Europe; and this department, as well as those of Ornamental Trees and Shrubs, Flowering Plants, Greenhouse Plants, Bulbous Flowers, and particularly Grapes, is by far the most extensive and valuable in America. The 24th edition of the Catalogue for 1827, has just issued from the press, and in addition to the immense acquisitions of former years, comprises above *500 new varieties* of the choicest Fruits, never before offered to the public, and not in possession of any other establishment in this country.

The collection of Grapes consists of above 250 varieties, including the finest wine and table grapes of France, Italy, Germany, and the Crimea. The Greenhouse department contains above 20,000 Plants, including all those species most beautiful and rare, among

which are above 1,000 fine Double Camellia Japonica of more than 40 varieties.

Catalogues are deposited for distribution at the office of the American Farmer, and orders left there, or forwarded direct per mail to the proprietor, will receive prompt attention. *March 9, 1827.*

VALUABLE HORSE FOR SALE.

That well known and very valuable horse Tom Jefferson, raised by the late Mr. Thomas Lewis, of Baltimore county, will be exposed to public sale in Monument Square, on Monday, the 12th inst., at 12 o'clock. Tom Jefferson was four years old last fall—sired by *Exile*, out of an *Eagle* mare. Persons desirous of obtaining his full pedigree, (which is not excelled by any horse owned in Maryland,) will be accommodated by addressing a note (post paid,) to

March 9, 1827.

E. LEWIS, Baltimore.

COTTON SEED.

The subscriber offers for sale several hundred bushels Cotton Seed, of prime quality, which has not in the slightest manner, been touched with the rot, a disease highly communicable from infected seed, and fatal to the crop.

The stock of this seed has grown at least two years in a part of Virginia of nearly our latitude and climate, and one year in Dorchester, Md.; and therefore is well adapted; a point of known importance to the planter. The requisite seed per acre is about two bushels.

By the way of Baltimore, where the subscriber, if required, will deliver it, almost any part of the state may receive it, in a few days after order.

A specimen of the cotton may be seen at the office of the American Farmer. JOSEPH E. MUSE.

Cambridge, Md. March 5, 1827.

PRICES OF STOCKS.

(Reported for the American Farmer, by MERRYMAN & GITTINGS, Stock and Exchange Brokers.)

Baltimore, March 9, 1827.

BANK STOCKS.		par value.	present price.
U. States' Bank Stock, per share, f. s.	\$100	118.25	
Bank of Maryland, do.	300	228 w	
Bank of Baltimore, do. (div. off.)	300	342 w	
Union Bank Maryland, do. do.	w 75	75 w	
Mechanics' Bank, do.	w 9	9.50	
Franklin Bank, do.	w 20	25.87 a 26	
Commercial and Farmers' Bank, do.	w 20	26.50	
Farmers' and Merchants' Bank, do.	50	55.00	
City Bank, do.	w 15	2.80	
Marine Bank, do.	w 25	27.75	
Farmers' Bank of Maryland, do.	50	53 w	

CITY STOCKS.		par value.	present price.
Corporation 6 per cent. redeemable after 1836,	100	111 w	
Do. 5 per cent. redeemable in 1832,	100	102 w	
Penitentiary 5 pr. cent. stock,	105		
Museum, 8 per cent. (no demand.)			
Masonic Hall, 6 per cent.	100	par & int.	
Annuities, or Ground Rents, 6 to 10 per cent.			

U. STATES' STOCK.		par value.	present price.
Six per cent. 1813, (div. off.)	100	102 1/2	
—, 1814, do. f. s.	100	103	
—, 1815, do. f. s.	100	104	
Three per cent. do.	100	8 1/2	
Four and half per cent. do.	100	102 1/2	
Five per cent. do.	100	107	

W., wanted—f. s., for sale, by Merryman & Gittings.

CONTENTS OF THIS NUMBER.

Agricultural Memoranda, Agriculture of the Greeks and Romans, Maxims of Farm Management of the Romans—On the Cultivation of Hops—Correspondence of G. W. Jeffry, Agricultural Library, On Soiling Cattle, On Wine Making, by Joseph Cooper—Notices of Pernicious and Unprofitable Plants, continued—Essay on the Cultivation of the Grape in South Carolina, by N. Herbermont—The Silk Culture, official correspondence—Horticultural Items—Tea Plant—Strawberries—How to choose a Husband—The Widow—The Setter Dog, with a cut—Inquiry on Pickling Pork and Beef, On Importing Seeds and Plants—Editorial Items—The Casket, or Flowers of Literature, &c.—Advertisements.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00	8 50		
BACON, and Hams, . . .	lb.	6	10	9	12
BEEF-WAX, Am. yellow	—	29	30		60
COFFEE, Java,	—	16	16 1/2	20	22
Havana,	—	14	16		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	11 1/2		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	13	15	16	18
Dipt,	—	11	13		16
CHEESE,	—	8 1/2	12	12	15
FEATHERS, Live, . . .	—	29	36	37	
FISH, Herrings, Sus.	bbl.	2 3/4	2 50		
Shad, trimmed,	—	5 50	6 00		
FLAXSEED,	bush	90			
FLOUR, Superfine, city,	bbl.	5 12 1/2	5 25		
Fine,	—	4 75	4 87 1/2		
Susquehanna, superfi.	—	5 00			
GUNPOWDER, Balti.	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	50			
white	—	50			
Wheat, Family Flour,	—	1 10	1 20		
do. Lawler, & Red,	—	1 00	1 10		
do. Red, Susque. . .	—	1 05	1 10		
Rye,	—	70	75		
Barley, Eastern . . .	—	1 10	1 20		
Do. country	—	90	1 00		
Clover Seed, Red . . .	bush	6 25	6 50	7 00	
Ruta Baga Seed, . . .	lb.	87		1 00	
Orchard Grass Seed,	bush	3 50			
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed,	—	4 00		5 00	
Oats,	—	45		50	
Beans, White,	—	1 38		2 00	
HEMP, Russia, clean, .	ton	250			
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb	18		25	
HOGS' LARD,	—	8	10	12	
LEAD, Pig	lb.	6 1/2			
Bar	—	7 1/2			
LEATHER, Soal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	31	32	37 1/2	75
Havana, 1st qual. . .	—	6 1/2		9	
NAILS, 6a20d.	lb.	6 1/2			
NAVAL STORES, Tar,	bbl.	1 50	1 62 1/2		
Pitch,	—	1 75			
Turpentine, Soft, . .	—	2 50	2 75		
OIL, Whale, common, .	gal.	33	34	40	
Spermaceti, winter . .	—	70	75	88	
PORK Baltimore Mess,	bbl	12 50			
do. Prime,	—	9 00			
PLASTER, cargo price,	ton.	3 25			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3 1/2	3 1/2	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5 1/2	8	10	12
WHISKEY, 1st proof, .	gal.	33 1/2	35	50	
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	13 00	13 50	14	15
SUGARS, Havana White,	c. lb.	10 00	10 50		
do. Brown,	—	7 75	8 10	10	11
Louisiana,	—	19	22	20	22
Loaf,	lb.	70		1 00	
SPICES, Cloves, . . .	—	7	12	12	18
Ginger, Ground, . . .	—	18		25	
Pepper,	—	50	55	75	
SALT, St. Ubes, . . .	bush	52		75	
Liverpool ground . .	—	8 50		12	
SHOT, Balt. all sizes, .	clb.	2 50	3 00	3 50	4
WINES, Madeira, L. P.	gal.	1 10	1 15	1 50	2 00
do. Sicily,	—	1 00	1 10	1 50	1 75
Lisbon,	—	1 50	1 60	2 50	
Port, first quality, . .	gal.	30	35		
WOOL, Merino, full bld	lb.	20	21	25	
do. crossed,	—	18	22		
Common, Country, . .	—	20	25		
Skinnners' or Pulled, .	—				

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AGRICULTURE.

(From the New England Farmer.)

ON THE MANUFACTURE OF CIDER.

The quality of cider depends on several contingencies; among which I will enumerate—

1. The species of fruit employed.
2. Soil and aspect of the orchard.
3. Condition of the fruit when ground.
4. The process of grinding, &c.
5. Management of the vinous fermentation; and
6. The precautions which are taken to prevent the acetous fermentation.

I intend to offer remarks upon each of these divisions. And,

1. *The Fruit.* Apples differ not only in their flavour, colour and time of ripening, but in the proportions of their constituent parts. The most material of these constituent parts are acid, sugar, astringency, vegetable extract and water. The properties of good dessert and cider apples, are seldom found united, though they are not incompatible with each other. Table apples are esteemed on account of their bland and aromatic flavour, crisp and juicy pulp, and for the property of keeping long, or ripening late. The characteristics of a good cider apple are, a red skin; yellow and often tough and fibrous pulp, astringency, dryness, and ripeness at the cider making season. "When the rind and pulp are green, the cider will always be thin, weak and colourless; and when these are deeply tinged with yellow, it will, however manufactured, or in whatever soil it may have grown, almost always possess colour, with either strength or richness."—(Knight.) The apple, like the grape, must attain a state of perfection, or perfect maturity, before its juices develop all their excellence; and as many of our best eating apples do not acquire this maturity until winter or spring, this affords a satisfactory reason why winter fruit is seldom or never good cider fruit. In a dry apple, the essential elements of cider are generally more concentrated, or are accompanied with a less proportion of water, than in a juicy one; of course the liquor of the former, is stronger than that of the latter. Of our best cider apples, ten or twelve bushels of fruit are required for a barrel of juice; while of the ordinary juicy kinds, eight bushels generally suffice.

The only artificial criterion employed to ascertain the quality of an apple for cider, is the specific gravity of its must, or unfermented juice; or, its weight, compared with that of water. This, says Knight, indicates, with very considerable accuracy, the strength of the future cider. Its weight, and consequent value, is supposed to be increased in the ratio of the increase of the saccharine matter. In making wine of domestic fruit, say of the currant or gooseberry, for example, we use sugar till the unfermented liquor attains a certain specific gravity; or until the saccharine matter of the fruit, and that artificially supplied, bears a certain proportion to the water. This insures to the liquor, strength, or body, as the sugar is converted into spirit by the fermentive process.

Very little has been done to acquire a correct knowledge of the relative value of our native apples for cider. Cox has described and figured one hundred varieties of this fruit, of which about thirty are recommended for cider. Of these thirty kinds, I selected the following for my nursery, as not only being best for cider, but as generally combining the desirable qualities of table fruit also: viz. the Hagloe and Virginia crabs; Harrison, Campfield, Sture, yellow Newton and Newark pippins; Priestley, Graniwinkle, Winesap, Carthouse and Cooper's russeting. We have, undoubtedly, among our indigenous fruit, many kinds of excellent cider apples hitherto unnoticed; and it is very desirable that

their properties should be tested, and the result of the investigation made public.

In Great Britain more attention has been given to this subject. The specific gravity of the juice of old cider varieties, has not only been ascertained by scientific men, and their relative value fixed, but new varieties have been obtained by artificial crossing, surpassing, in richness of juice, any before cultivated. Loudon has given a table of 38 cider apples, in his *Encyclopædia of Agriculture*. Of these, the following are only known to be in our nurseries, viz. *Redstreak, Wine, Stire, Hagloe crab, *Maiden's Blush, *Count Pendu, *Downton and Grange pippins, Foxley, Siberian Harvey, yellow Siberian, and *Minshul's crab. Those with an asterisk are also excellent dessert apples. The seven last named, five of which are new varieties by Knight, I have obtained from Europe, and propagated in my nursery. None of the old English cider varieties exceed, in the specific gravity of their juice, 1079, water being 1,000. Six of Knight's new varieties are over 1,079, and one is 1,091. Knight is of opinion, that with proper varieties of fruit, the defects of almost every soil and aspect might be corrected, and that fine ciders might be made in any part of England. In France and Italy, small berried grapes of a harsh flavour are preferred for wine making, (Loudon,) and it will be found that the cider apples recommended by Loudon and Cox are under a medium size, and several of them austere and harsh.

2. *Soil and aspect.* The apple, like the grape, is known to take much of its character from the soil on which it grows. The best cider orchards in England are on a stratum of red marl which stretches across the island. The soil of Herefordshire, highly reputed for its ciders, is an argillaceous, or clay marl; and Knight says, the strongest and most highly flavoured cider which has been obtained from the apple, was produced from fruit growing on a shallow loam, on limestone basis. All the writers upon the subject seem to agree, that the calcareous earth should form a component part of the soil of a cider orchard. It appears to have the effect of mitigating the harshness of rough and austere fruits, and of neutralizing the juices of those which are too acid. Cox says, the soil which grows good wheat and clover, is best for a cider orchard. My own observation would induce me also to prefer a dry and somewhat loose soil, in which the roots, destined to furnish food for the tree and fruit, may penetrate freely, and range extensively, in search of nutriment. The juices of plants and fruits are always more concentrated when growing on a dry, than on a wet soil. Mint, or other aromatic herbs, is much stronger in the soil, and greater in volume, when grown on a wet one. The maple yields the sweetest sap, though less in quantity, on a dry soil. Apples may grow large on a moist alluvion; but the fruit will neither be so abundant, nor so rich, as on a dry soil. The thickest trees produce the most wood buds; those less thrifty, the most fruit buds. The best aspect for an orchard is one somewhat elevated or undulating, protected from prevailing cold winds, and facing the south, south east or east. Ciders brought to the Albany market, from the hilly towns of Columbia and Saratoga, on the transition formation, possess the most spirit, best flavour, and resist longest the acetous fermentation.

3. *Condition of the fruit.* Fruit should be used when it has attained its perfect state of maturity, and before it begins to decay, because it then yields the greatest proportion of saccharine matter. The most certain indication of ripeness, says Crocker, is the fragrance of the smell and the spontaneous dropping from the trees. Each kind of the apple should be manufactured separately, or those kinds only mixed which ripen at one time, and which experience shall show, are not prejudicial to each

other. Who would ever think of making a superior wine from an indiscriminate mixture of a dozen kinds of grapes? And yet we seem to expect good cider from an indiscriminate mixture of a dozen kinds of apples. It may be urged, that the evil is irremediable, because our orchards, containing these dozen varieties, have been furnished to our hands; and that neither the quantity nor quality of any one kind of fruit renders it an object to manufacture it separately. Is it not time, then, to set about correcting the evil, by selecting only the best kinds for new plantations. A farmer should make cider to sell, and it is material to him whether he obtains two or ten dollars the barrel. Our manufactories, our towns and cities, and the demand for exportation, will always ensure a market and price for good ciders. Mr. Wynkoop, of Lancaster, Pa. has 400 trees, of the Virginia crab, on less than five acres of ground; and when his orchard was twenty two years old, he stated to the President of the Pennsylvania Agricultural Society, that it produced him every other year forty hogsheads of cider, of 112 gallons each; which he sold at Philadelphia at 2s. 6d. the gallon, or about \$1500 in the gross. And yet this apple is not a first rate cider apple. It is deficient in sugar, but abounds in astringency, rather a keeping than an enriching quality. What farmer can apply his land to better profit? Wines differ as much in their quality and price as ciders. Fruit, soil and skill make the difference in both; and upon the proper selection and expense of those, depend the quality of the liquor, and the consequent profits of the cultivator. Upon this branch of the subject I will only add, that the apples should ripen upon the tree, be gathered when dry, in a cleanly manner, spread in an airy, convenient situation, if practicable, for a time, to induce an evaporation of aqueous matter, which will increase the strength and flavour of the liquor, and be separated from rotten fruit and every kind of filth, before they are ground.

4. *Grinding, &c.* The apples should be reduced, by the mill, as nearly as possible to a uniform mass, in which the rinds and seeds are scarcely discoverable; and the pomace should be exposed to the air from twelve to twenty-four hours, according to the temperature, before it is pressed. The juices of the rind of fruit, as may be instanced in the orange and lemon, are highly concentrated; and those of the rind of the apple have a material influence, with the aromatic bitter of the seeds, upon the flavour and strength of the liquor.

On partially macerating the pulp of an apple, and subjecting it to immediate pressure, the juice which escapes will be found to be thin, nearly colourless, and devoid of flavour. If the maceration is perfect, so as to crush the seeds and break down the rind, the strength, colour and flavour of the must will be improved; and if the macerated pulp is exposed for a few hours to the atmosphere, and then subjected to pressure, these desirable properties in the liquor will be found to be still further augmented. "By the chemical action of the roller," says Knight, "the various fluids which occupy the different vessels and cells of the fruit, are mingled with the juices of the rinds and seeds, and with the macerated substance of the vessels and cells themselves. In such a mixture it seems probable that new elective attractions will be exerted, and compounds formed, which did not exist previously to the fruit being placed under the roller; and hence the most correct analysis of the expressed juices will convey but a very imperfect degree of knowledge of the component parts of the different fluids, as they existed in their state of separation, within the fruit." "I have often extracted," he continues, "by means of a small hand press, the juice of a single apple, without having previously bruised it to pieces; and I have always found the juice thus obtained to be pale and thin, and extremely defective in richness, though the apple possessed great

merit as a cider fruit. I have then returned the expressed juice to the pulp which I have exposed, during a few hours, to the air and light; and the juice has then become deeply tinged and very rich. In the former state it apparently contained but a very small portion of sugar; in the latter it certainly contained a great quantity; much of which I believe to have been generated subsequently to the juice having been subjected to the action of the press; though it may be difficult to explain satisfactorily the means by which it could have been produced." Knight ascertained, by a subsequent experiment, that by exposing the reduced pulp to the operation of the atmosphere, for a few hours, the specific gravity of the juice increased from 1.064 to 1.073; and from the experiment being repeated in a closed vessel with atmospheric air, he ascertained the accession to be oxygen, which according to Lavoisier, constitutes 64 per cent. of sugar. For fine cider, he recommends, that the fruit be ground and pressed imperfectly, and that the pulp be then exposed twenty four hours to the air, being spread, and once or twice turned, to facilitate the absorption of oxygen; that it be then ground again, and the expressed juice be added to it before repressing. In straining the must, too much care cannot be taken to exclude the pulp, as its presence is apt to render the fermentation too violent, and drive it into the acetous stage. A hair sieve, filled partly with straw, answers the purpose well. The mill which most effectually reduces the pulp is to be preferred. It has been remarked with much force, that cider mills should, like school houses, be limited to one in a district. In this way it would be an object with the owner to render his implements complete, and to conduct the process with care and skill. And as the value of the cider depends so much upon its being well made, it is believed the owners of fruit, as well as the purchasers of the cider, would be benefitted by such an arrangement.

5. *Vinous fermentation.* This is commonly called *working*. It commences at the temperature of 59° Fah. and cannot be conducted in safety when the heat is over 75°, for a high temperature induces a too rapid fermentation, by which much of the spirit passes off with the disengaged carbonic acid gas, and the acetous or vinegar fermentation begins at 77°. This will show the importance of conducting the vinous fermentation under a proper temperature, which is from 50 to 70° of Fah. To show the chemical effect of the vinous fermentation, it will be proper to repeat that the unfermented juice, or *must*, of the apple, consists of saccharine matter or sugar, vegetable mucilage or extract; astringency or tannin; malic, and a small matter of gallic acid, the principle of flavour, tinging or colouring matter, and water. The sugar becomes the basis, or spirit, of the fermented liquor; the spirit, after vinous fermentation, and the tannin, or astringent matter, preserve it from the acetous fermentation, if the vegetable mucilage, or yeast, is separated when it has performed its office. This vegetable mucilage acts upon the saccharine matter in a manner analogous to yeast upon the wort of the brewer—it causes fermentation, and converts sugar into spirits—by its giving off carbonic acid gas, and imbibing hydrogen; the liquor becomes clear, and part of the mucilage rises to the surface with the disengaged air, in the form of froth, and the residue is precipitated, with the heavier impurities, to the bottom, in the form of sediment or lees. This is the critical period. The liquor may now be drawn off clear. If left longer, the feculent matter, or froth, by parting with the gas, which renders it buoyant, soon settles and mixes with the liquor, renders it turbid, and as soon as the temperature attains a proper height, causes a new fermentation. This will explain the reason why ciders become harsh and sour on the approach of warm weather in the spring. The elementary principles of sugar, ardent spirits and vinegar, it has been as-

certained by the experiments of Lavoisier, are the same; and these substances only differ in the proportion of their component parts, and in the modes of their chemical union. Sugar consists of hydrogen, oxygen and carbon. An increased proportion of hydrogen enters into the composition of ardent spirits, and of oxygen into vinegar. The same agent, vegetable mucilage, which converts the sugar of the apple into spirits, will convert the spirits into vinegar, under a proper temperature, and aided by the oxygen of the atmosphere. The process of making vinegar is greatly accelerated by exposing cider or wine to the atmosphere, the oxygen of which it imbibes, and which is termed by chemists the great acidifying principle. Here again we see the propriety of professional cider manufacturers, who might be provided with cellars where the temperature could be regulated, and who would carefully rack off the liquor at the completion of the vinous fermentation.

The vinous fermentation commences and terminates at different periods, according to the condition and quality of the fruit, and the state of the weather. The juice of unripe fruit, if the weather be warm, will begin to ferment in a few hours after it passes from the press; and seldom stops at the vinous stage. The juice of ripe fruit, when the temperature is lower, does not begin to ferment under a week or fortnight, or longer, often continues slowly through the winter, and when made from some of the finer cider apples, is not completed under six or nine months. Indeed, in some cases the liquor does not become clear under a year, and the sugar is not wholly decomposed under two years: for the whole of the sugar is seldom decomposed during the first sensible fermentation. Knight considers cider at two years old as in the best state for bottling. For until the sugar is decomposed, fermentation insensibly goes on, and the strength of the liquor increases. The like insensible process goes on in wines, and when it is completed, the wines are said to be ripe, and are in their highest state of perfection. (See *M. Culloch*.) Temperature being the same, I think it may be assumed as a rule, that fermentation will be rapid and short, in an inverse ratio to the proportion which the saccharine matter bears to the mucilage and water; and that the vinous liquor will be rich, high flavoured and durable, in proportion as the sugar and astringency preponderate in the must.

6. *Precautions to prevent acetous fermentation.*—These are, supposing the previous contingencies to have been favourable, a careful separation of the vinous liquor from the froth and lees—a cool temperature—racking and fining—and artificial means to destroy the fermenting quality of the remaining mucilage.

I have already suggested the importance of drawing off the liquor from the scum and sediment—at the termination of the vinous fermentation. This period may be known by the cracking of the froth in an open cask, or, if in a close one, by the application of the nose or ear to the bung hole. If the fermentation has not ceased, a hissing will be apparent, and the gas given off will give a pungent sensation to the nose. If the liquor is not sufficiently clear, or indications appear of the acetous fermentation having commenced, the cider should be racked into clean, strong casks, and fined with isinglass, eggs, or skimmed milk. This operation may be repeated, if found necessary; but it should be performed in clear, cold weather. After the first racking, the casks should be kept bunged close, and further rackings be avoided, if possible, as every racking reduces its strength, and much of the spirit escapes with the carbonic acid gas which is evolved in the fermentive process. The oxygen of the atmosphere, besides, increases the vinegar fermentation. But if these methods fail, resort may be had to the means of impeding the natural operation of the mucilage,

or vegetable leaven. This may be done by what is called *stunning*, that is burning a rag impregnated with sulphur, in the cask in which the liquor is to be decanted, after it has been partly filled, and rolling it so as to incorporate the liquid with the gas; or by putting a drachm or two of the sulphite of potash into each cask, which will precipitate and render insoluble the remaining leaven. If the fruit is good, and properly ground, and the cider racked from the fermenting casks at a proper time, most or all of the subsequent operations will be superseded.

I fear, Mr. Editor, I have been too prolix upon a subject which almost every farmer professes to understand; yet considering it, as I do, of great importance to the community at large, I cannot close this without suggesting to the consideration of the enlightened Trustees of your state Agricultural Society, the propriety of ascertaining, by experiment and analysis, the comparative value of our cider fruit, and of awarding premiums, not only for the discovery of the best kinds of cider apples, but for indigeneous or hardy grapes, best adapted for American wines.

J. BUEL.

Albany, Feb. 26, 1827.

Letters on various branches of American Husbandry, being part of the unpublished agricultural correspondence of G. W. JEFFREYS, of North Carolina—communicated for publication in the American Farmer by request of the Editor.

ON FRUIT TREES.

SIR,

Burlington, June 12, 1817.

I have been favoured with a letter from you of the 29th May, requesting some information on the cultivation of apple orchards and other kinds of fruit trees. It has ever been an object particularly interesting to me, as a source of rational and pleasing occupation—and I have been gratified by the improvements which have been progressing rapidly in our country since I first turned my attention to the subject. I proceed to answer your queries as they respectively occur, but in a very summary and condensed manner; and for more full information I would refer you to a work now publishing by Messrs. Matthew Carey & Son, of Philadelphia, wherein I have treated at large the subject of fruit, orchards and cider, and have described and delineated by engravings of the full size and natural formation about 200 kinds of fruits cultivated in this state.

1. The soil best adapted for an orchard is a loam or loamy clay; but any soil which will produce good wheat and red clover, will answer, a wet subsoil or quicksand excepted.

2. Nurseries are best situated when on soils of the foregoing description. The apple seeds from the pumace of the latest ciders are scattered on ground previously well cultivated and cleaned from the seeds of weeds; then covered and neatly raked. They remain during the winter in this state. The next season they are thinned and weeded. The following fall or spring, they are planted in rows four feet apart, one foot distant; well ploughed and harrowed to promote their growth. They are inoculated the next autumn, or engrafted the next spring if the growth be vigorous; if not, they must remain a year longer. The buds are inserted about two inches from the ground, and the grafts may be inserted just under the surface, which is removed by a hoe for this purpose, and then returned so as to cover the fissure and lower ends of the scions, which require no bandage or composition when carefully treated in this mode. In every stage of a nursery, and also of an orchard, the trees grow in proportion to the frequency and perfection of their cultivation. In two or three years from engrafting, if well managed, and when planted in good ground, they will be large enough to plant out. Their stems should be from one to two inches in diameter, a

foot from the ground. Scions should be cut in February, from the last year's growth of healthy bearing trees, and kept till wanted on a cellar floor, or the lower ends buried in cold situations to retard the flow of sap. Trees of more than two inches diameter, are best engrafted in the limbs; whether engrafted in the nursery or orchard, must depend on convenience alone, provided they are high enough to be protected from cattle.

3. Trees *should never be planted deep*. One or two inches lower than their growth in the nursery is best. My rule is to dig two spits deep, a hole large enough to hold the spade horizontally laid down. The best earth should be laid round the roots. Rich earth, or ameliorated ditch bank, is better than dung, which attracts ground mice, and is liable to be affected by the dry weather of our summers. I prefer surface manuring to any other mode of applying dung—ploughing it in—from fifty to thirty feet is the distance I adopt, according to the soil and natural size of the trees when full grown. At thirty feet, forty-eight trees will stand on an acre; thirty-five trees at thirty-five feet; twenty-seven at forty feet, and only eighteen at fifty feet. I have 144 acres planted with 4000 apple trees, with these several distances, from seven to twenty-two years old. Probably forty feet is a good medium distance.

4. Mud from meadows on sandy soils; marl on all soils, and barn yard manure on all soils; ashes I use to a great extent. In general, the better the farming and the richer the ground, the more will trees grow. Fallow crops of all kinds, viz: Indian corn, potatoes, pumpkins, &c. are preferable to culmiferous grains. Buckwheat is a good crop; grass only is injurious in proportion as it prevents cultivation, and hinders the beneficial effects of light, heat and moisture to the roots, which grow best when extended as much as possible in a horizontal direction.

5. Our climate does not require such close pruning as the cold and moist one of England. I, however, trim closer than my neighbours. Branches should never cross each other; they should extend as equally as possible from the centre, in increasing distances, to admit light, heat and air to every part. The lower limbs should be so high as to permit the horses and ploughman to pass under them. This opens the ground and its products to the rays of the sun. Trees should be carefully kept free from suckers from both the roots and branches.

6. Moss is best destroyed by scraping in damp weather; whitewash is highly useful; but the best preventive is good cultivation and rich ground. Caterpillars are easily destroyed in the morning and evening, when in their youthful stages, and in wet weather; at all which times they remain in their nests. I know little of the canker. I have, in the few instances in which I have observed it, found the best cure was to dig up the tree and replace it with another.

7. In light soils, fall planting is equally good with that of spring. It is a season also of leisure. I have used both modes, as suited my convenience and the cultivation of my grounds, with little difference in the success of the operation. A crop of Indian corn, or any other fallow crop, is a good preparation—the previous loosening the soil by cultivation facilitates the operation of planting. In light grounds, I generally throw the second spit some distance from the tree, supplying its place by the superior surface earth. Most frequently I plant in the fall; immediately after, and through the whole of the winter, I cast rich ditch bank earth or meadow mud, several loads around each tree, spreading it when ameliorated by the frost five, six or seven feet from the tree, according to its richness and quantity. On one farm I have used 5000 loads of mud around 1300 trees, on 40 acres of ground on a light sandy loam. The growth of the trees and the

size of the fruit is thereby much promoted. I have particularly attended to this mode in the cultivation of the Virginia, or Hewes' crab, of which I have about 1300 trees on 50 acres. The small size of this apple is much improved, and its disposition to hang on the tree is increased by manure and cultivation. I have forwarded a catalogue of the fruits raised in this neighbourhood. That of 1810, was the collection owned by me, and cultivated by Mr. Daniel Smith. I found it a losing concern from the great extent of the establishment, and from the war.

I hope to make up a very heavy loss by my orchards, which are in the highest state of vigour and perfection, on the banks of the Delaware. I have about 150 varieties of the apple, selected according to their quality—two thirds for cider, and one-third for the table, for the Philadelphia market. I have obtained almost every valuable kind that I know of, foreign or native. The apples of our own country are unquestionably superior to those of Europe, from whence I have imported, and am now cultivating, most of the apples of high reputation.

Peach stones from *natural fruit*, usually produce the same kinds. Those cultivated for the Philadelphia and New York markets, are raised by inoculation from the finer European kinds, of which many exquisitely flavoured varieties have been imported. These will produce fruit of a quality much improved, compared with the common peaches of our country, although of different kinds from the original planted fruit. Cherry stones from the natural black mazard and from the morello, will produce the same kinds; but as all the numerous varieties of the heart, duke and other imported kinds, are raised by inoculation or engrafting on the first mentioned two kinds, their stones will produce cherries resembling the parent stock. The same remark applies to all stone fruits. Of the apple and pear, the seeds can never be relied on to produce any specific kind, whether natural or engrafted. We always resort to inoculation or engrafting, when we are desirous of possessing any particular kinds.

I am, sir, respectfully, and with my best wishes for your success in your laudable plan of improvement,

Your obed't serv't,

WM. COXE.

MR. G. W. JEFFREYS.

IMPLEMENTS OF HUSBANDRY.

DEAR SIR,

Hartford, Conn., Sept. 19, 1818.

What time I could spare the last season from improving, planning and laying out my farm, has been mostly devoted to improvements in the implements of husbandry. I have now in successful operation,

- 1st. The Jointed Harrow, square form, taken from the Domestic Encyclopædia, vol. 3, p. 252.
- 2d. A Cut Harrow, or kind of scarifier, short teeth like coulters, pointing backwards, for cutting turf on land you would not willingly break up.
- 3d. A heavy triangle Harrow, made in halves, with a joint in the centre; the best implement on new lands which are encumbered with stubs, roots or stones, I ever saw, as the elasticity of the joints will prevent it from catching.
- 4th. A two-furrow Plough, which is made by the yoking two common ploughs, and with which I have ploughed at the rate of an acre in 91 minutes, with two yoke of oxen; as fine a tool as can be found for light lands, crossing fallows and ploughing in seed, &c.
- 5th. The Horse Hoe, a very valuable implement, to be had at the Agricultural Repository in New York, price \$20—but you must be particular, for although the principle is good, the work and iron of mine was not good, and I had to rebuild the defective parts.

6th. A Cart, the wheels 2 feet 2 inches diameter, and 1 foot thick; the body 5 ft. 6 in. square—the use confined to the farm, and it adds greatly to the facility of removing earths, manures, stones, &c.; runs much easier in soft ground, and does no injury.

7th. Is a halved Roller, by means of a round bar of iron being passed through the centre for an axle; the roll is then sawed in two. Its great use is in pulverizing stiff soils, and its preference over the common roll is in turning without scooping out a hole in the ground.

I fear I have written too much, without being any way able to benefit you, or those with whom you are so laudably engaged; but I cannot close without protesting against the universal waste of manure, the stamina of agriculture; instead of which, the offal of the house, the barn and field, should all be collected and secured for compost; and the deficiency should be supplied by green crops turned in, either clover, oats or buckwheat.

I shall be glad to learn, from time to time, the result of your experiments and improvements, and shall have no hesitation in communicating such as come to my knowledge.

I am, with much respect,

Your obed't serv't,

DAVID PORTER.

G. W. JEFFREYS, Esq.

NOTICES OF PERNICIOUS AND UNPROFITABLE PLANTS,

Which infest the Farms in Chester county, Penn.

(Continued from page 403.)

No. 3.

PENTANDRIA.—MONOGYNIA.

Solanum nigrum. Night-shade.

A worthless weed, frequent about yards, gardens, in orchards, &c., but rarely extending over the farm, and not difficult to keep in subjection.

Solanum Carolinense. Horse-nettle. Carolina night-shade.

This plant has been introduced from the southern states, and has latterly got possession of the ground in several localities. It is an obnoxious weed, its prickles preventing cattle from feeding among it; and as its roots are perennial and very tenacious of life, it promises to be troublesome to the farmers, if they do not carefully guard against its progress.

Campanula amplexicaulis. Clasp bell-flower.

A plant of no value, and abounding in cultivated grounds, particularly in wheat fields; but it is not so injurious as to attract much attention.

PENTANDRIA.—DIGYNIA.

Cuscuta Europæa. Flax-vine. Dodder. Devil's guts.

This singular, parasitic plant, has been introduced from Europe, and frequently appears among our flax crops in such quantities as to be highly pernicious, twining round it, and entangling it, so as to destroy the value of large patches. Care in the selection of seed, is, perhaps, the only way to guard against the evil. The American species of this plant, though very common, it is believed never interferes with, or injures any valuable crop.

Daucus barota. Wild carrot.

A foreigner, but abundantly naturalized; and a very troublesome, worthless plant to the farmer. Many farms are over run with it, and some neglected old fields almost monopolized by it. The umbels of seeds are often dispersed far and wide on the top of the snow, in the winter season, by the winds; and thus the product of one neglected farm may annoy a whole neighbourhood. Nothing but the united exertions of the agricultural community can effectually subdue this pest. Being a *biennium* however, it may be conquered by vigilance and

severance; but it must be rooted out, for it is a true vegetable *hydra*, and cutting it off only gives rise to a multiplication of heads.

Pastinaca rigida, Torrey. Water parsnip. Cow-bane.

This plant occurs, occasionally, in our swampy meadow grounds and along rivulets; and is not only worthless, but it is said to be poisonous to horned cattle, when eaten by them. It is, however, easily extirpated.

Cicuta maculata. Wild parsnip. Water hemlock. Spotted cow-bane.

This is pretty frequent in swampy meadows and along ditches, &c. It is an active poison; and children have been destroyed by eating the roots, in mistake, for those of the sweet cicily. It may readily be kept down, which neat farmers are careful to do.

Chenopodium album. Lamb's-quarters. Goose-foot.

A troublesome weed in gardens, farm yards, &c. requiring constant care to keep it in subjection. It is not altogether useless, as housewives sometimes boil the young plants, and serve them up at table under the name of "greens."

PENTANDRIA.—TRIGYNIA.

Sambucus canadensis. Elder bush.

This is a troublesome plant to the farmer, the roots being very tenacious of life, and spreading rapidly along fences and field sides, unless extirpated with great care and perseverance.

Rhus glabrum. Common sumach. Smooth sumach.

This shrub, also, inclines to form thickets along fences, and to encroach on the fields, especially in poor land; but it may easily be kept down—and, in fact, is rarely permitted to get a-head, except by the most unthrifty and slovenly farmers.

Rhus radicans. Poison vine.

This plant does not interfere much with the grounds or crops of the farmer, being mostly confined to fences, stumps, or bodies of trees; but it is generally destroyed, when it appears, on account of its poisonous effects upon many persons.

(To be continued.)

ANSWER TO CERTAIN INQUIRIES.

MR. SKINNER, *Wilmington, March 5, 1827.*

I give you the following answers to some of the queries of J. B., inserted in the 8th vol. American Farmer, p. 380.

If none more satisfactory are handed you, you can publish them if you please.

To the 1st query—

Goats require but little care or attention. The kids ought to be kept apart from other animals until they are ten or fifteen days old; after which, they may safely run at large.

The goats require a shelter from rains. In our warm climate they will thrive well in the woods, requiring no other food than they themselves can pick up, except in winter, when they ought to have a very small quantity of grain. They will eat any vegetable.

They will be completely prevented from climbing, by paring the bottoms and edges of their hoofs once or twice a year, and become as harmless as sheep.

The best time for castrating them, is in mild weather, either in the spring or fall, and may be done at any age under twelve months. The operation is very simple and safe: cut off the lower extremity of the scrotum; let the testicles pass through the orifice, and cut them off about one-fourth of an inch above the testicle.

To the 2d query—

The most favourable season for spaying hogs, is in mild weather in spring or fall.

The most favourable age for the animal from four to eight months, depending on its growth.

There are two methods of performing the operation: one, in the side; the other, in the belly. I prefer the latter, because the blood passes off through the orifice. As to the minutiae of the operation, it can be better learned by five minutes' observation in seeing it, than described on a sheet of paper.

To the 4th query—

The twig of an apple tree which has taken root and grown to maturity, will produce the same fruit as the original tree; and will not differ in its fruit from what it would have produced, had it been grafted on another stock. Some experienced orchardists prefer raising the *horse apple*, from the cutting, to grafting it on other stocks.

It is, however, said by them, that other apple trees are not so durable when raised from cuttings, as when grafted on seedling stocks.

To the 5th query—

A fat lightwood post charred, in an ordinarily dry situation, is more durable than any other. I have seen them perfectly sound, when, from circumstances, it was supposed they had been standing more than fifty years.

In situations exposed to continual wet and moisture, no wood can be more durable than the heart of black cypress. There are many facts which induce a belief, that a black cypress log will lie on a soil constantly moist, more than an hundred years without rotting.

A post of the heart of post-oak, will last from twenty to thirty years.

Yours,

P.

[How much would the utility of this medium for interchange of information be augmented, if all farmers would follow the example of our correspondents, friend Kersey, who will appear in our next, and the writer of the above, who is, to us, unknown. They manifest a spirit that should always prevail amongst those who follow a calling that seems, of itself, to generate frank and liberal dispositions.]

PROFIT OF MERINO WOOL HUSBANDRY.

MR. SKINNER, *Steubenville, March 8, 1827.*

Your correspondents have, in some instances, given you flattering accounts of sheep shearing, and the sales of their fleeces. I beg leave to state, that Adam Hildenbrand, a faithful man in my employ, wintered ten Merino rams, the fleeces of which yielded, at my sheep shearing in June, 1825, 75 lbs. of wool, which I sold at 80 cents per lb. This was an average of six dollars per fleece. *Belwar*, the prize ram, who achieved the silver cup at the late Maryland cattle show, was among the ten, and stands now unrivalled, take him all in all, by any Merino or Saxony ram in the United States. This fine animal is now the property of Messrs Dike & Duncan, of Ohio, to whom I sold him some time ago,* with a number of the purest and finest Merino ewes. Those gentlemen have commenced the business of sheep husbandry with great spirit, in Starke county, Ohio; and from their advantages in point of soil and situation, and their unremitting attention, I am led to believe, and I take great pleasure in saying so, that they will, in a few years, have one of the finest flocks in the county.

I am, very truly and respectfully,

Your friend and obedient serv't,

W. R. DICKINSON.

[*For this uncommonly fine ram, which at our last cattle show took Mr. Rebello's premium, offered for the sheep, yielding on the ground, the greatest weight of picklock wool, Messrs. Dike & Duncan gave \$100. He is a Merino of *American growth*, and proves that, with care in the selection of breeders, the western country may rival in fine woolled sheep any part of the globe.—Ed.]

HORTICULTURE.

(From the Boston Medical Intelligencer.)

BLACK CURRANT WINE.

Mr. Editor,—Agreeably to your request, I have the pleasure to furnish you with the following history of the wine which I have prepared for some time past from the *official black currant*. About twenty years ago I cultivated a few plants only, for the purpose of making a *jelly* or *preserve* for family use; and some of it happening to be on the table when I was favoured with the company of that estimable man and eminent physician, the late Dr. John Warren, a conversation ensued on its medicinal qualities, which he highly extolled, and expressed a strong desire that the confectioners in Boston should be supplied with the *fruit*, observing that the Faculty would often prescribe the *Jelly* or *Rob* if it could be procured. In consequence of his suggestions, I was induced to increase the plantation, and in a few years was enabled to supply the confectioners with more fruit than they wanted. For the demand being uncertain, and as the article would seldom retain its virtues more than one year, three or four bushels only could be annually disposed of. About this time I met with an *HERBAL*, written by the late celebrated Dr. Heberden, of London; in which, after describing the species or varieties of currants, he states that the medicinal properties of wine made from the *red* or *white currant*, are much superior to those of wine from the *grape*, as it may be administered in many cases of *fever*, where the latter would be too heating. No mention was made of wine from the *black currant*, but the doctor remarks, that "a *Jelly* or *Rob* from this fruit was considered almost a specific for sore throat, and highly efficacious when exhibited with barley water and other beverage, in fevers, particularly in the low stages of the typhus." The idea then occurred, that I could not do better with my black currants than to manufacture them into wine, as I felt confident that it might be made to possess all the mild *stimulating* qualities of the other kinds of currant wine, combined with the more valuable *astringent* and *detergent* properties so conspicuous in the *jelly*. It would be as convenient to administer,—and, what was of great importance, not liable to deteriorate by age. Accordingly, I commenced operations, with no small portion of enthusiasm; and notwithstanding a complete failure in all my experiments for four years in succession, with considerable loss of time and money, I persevered till a wine was produced which equalled my most sanguine expectations, and which I ventured to exhibit to most of the principal physicians in Boston, several of whom immediately began to prescribe it, and have continued the practice, as have others also in the vicinity, for eight or nine years. Being desirous to test its capacity to withstand a *hot climate*, a parcel was shipped to Savannah, where it remained in a store on the *bluff* two summers, and was returned perfectly sound and much improved.

Some years since I was unable, one season, to inspect the process, and though the person employed received very particular directions, the quality proved inferior, and the reputation of the wine may have suffered in consequence. But I have of late introduced important improvements in the preparation; and that which is now exhibited will, I trust, be found to be superior to any before produced. But to arrive at this result, it has demanded minute personal attention in every stage of the process—from the cultivation of the plants till the wine is fit for the bottle; and its remaining previously for a period of four or five years in the *wood*, seems requisite to bring it to that state of perfection of which it is susceptible. It may be proper to add, that besides the water necessary, this wine contains not a particle of *foreign substance* except sugar, and two

per cent. of brandy, which is introduced at a stage of the process when it appears to return to its original vinous state, and is of course completely incorporated.

I am, dear sir, truly yours,

SAMUEL WYLLYS POMEROY.

Brighton, March 5, 1827.

[Remarks on the above by the Editor, Dr. Coffin, a physician of highly respectable standing in Boston.—ED. AM. FARM.]

We are glad to see and to publish this account of the *Black Currant Wine*, because we have been acquainted with its character and effects for several years, and think so well of it that we wish every body else to know it as well, and to estimate it as highly as we do. So far as we can trust our own experience and observation, we deem this wine more truly cordial and medicinal than any which we have seen used by invalids and convalescents. It has all the good properties of the best Port, without any of its heating or constipating effects. We could name several instances wherein great debility and exhaustion after protracted and severe fever, and from other causes, nothing else could be thought of or taken with pleasure or advantage, in which this wine proved grateful to the palate, and most friendly to the stomach; in which, indeed, it was the principal means of conducting the patient to health and strength.

Its exhibition has been attended with remarkable success in the early stages of cholera and dysentery; and again also in the later stages of these diseases, after the symptoms of inflammation or febrile excitement had ceased. It has been strikingly remedial in the low states of typhoid and bilious fever. The late Captain Gilchrist, who for several years followed the Batavia trade, and who had always suffered an attack of the severe cholera, which proves so destructive of human life in that climate, used to say that after he had this wine with him, and took two glasses of it every morning, he escaped the disease. On one voyage, his mate, who had not taken the wine, was seized with this complaint, when a bottle or two stopped its further progress. We have not room to enumerate many other morbid affections in which this wine has proved useful. In sore throat it has, for many years, been considered almost a specific remedy.

ON THE DISEASES OF PEACH TREES.

Sir, Hanborough, Illinois, Feb. 4, 1827.

I am induced to address to you the following observations on the peach tree, in the hope, that by attracting the attention of practical horticulturists, ideas may be elicited which will give a lead to further experiments.

Although this tree is not subject, in our district of country, to the diseases which prove so fatal on the eastern side of the Alleghany mountains, and is singularly luxuriant; yet, from a cause I am led to suppose does not operate in the vicinity of the sea, from not appearing to have attracted the notice of your correspondents, it may almost be considered useless.

My attention was first directed to this subject, by observing that fine luxuriant trees of full size produced no blossoms. The ensuing spring, the trees being again covered with blossom buds, which they never fail to produce while in a growing state, I bisected a bud from the point to the base; and found the embryo blossom changed from a light green, its natural colour, to a dark brown, and evidently dead. As we generally have a fortnight of warm weather the latter part of February, succeeded in March by severe cold, it was my first impression that the buds were partially swelled by the warmth, and being rendered more tender, were afterwards destroyed by a degree of cold which would not

otherwise have affected them. The wild plum being much later in putting forth its blossoms, I transplanted a number of the young trees from the woods into my garden, and inoculated them two or three inches from the ground, with several varieties of the peach; expecting I should thus prevent the sap from rising so early as to endanger the safety of the buds: but, to my surprise, they have continued to put forth exactly at the same period with those inoculated on peach stocks, and others raised from the stones; and their buds have been destroyed in like manner.

I afterwards met, in an English magazine, with the account of an experiment made in the north of France, which completely satisfied me as to the cause of my failure. I would quote it literally, but as I cannot, unfortunately, now lay my hand upon the book, I must trust to memory.

A pot, containing a rose bush having two long branches, was taken during a severe frost, which continued during the greater part of the time occupied by the experiment, and placed in front of a hot-house. The ball of earth in the pot was frozen solid. One branch was drawn into the house, and the opening through which it was introduced carefully luted. Being subjected to a heat of about 80° of Fahrenheit, it gradually expanded its leaves, and even bloomed, while the branch without remained inert.

The practice which is now most approved in England for the management of the grape vine in forcing houses, seems to confirm the result of this experiment. The vine is planted on the outside of the house, near the front; is then introduced into it, and trained upward near the glass roof.

The conclusion seems irresistible, that the sap remaining in the branches is sufficient to throw forth the leaves and blossoms; and that the action of the atmosphere upon the branches alone is sufficient to produce this effect. The tree must afterwards, doubtless, depend upon its roots for nourishment.

Admitting this conclusion to be just, the idea of rendering foreign vines sufficiently hardy for our uncertain climate, by grafting them on native varieties, is fallacious; as well as many other suggestions for retarding the bloom of fruit trees, to prevent its destruction by the late spring frosts, by covering the ground about them with straw, refuse of flax, &c. which have been made in many publications in the United States.

Being thus baffled in my first attempt to ascertain whether my impressions, as to the cause of the destruction of the buds, were correct or otherwise, the two succeeding winters I examined my trees every day, carefully noticing the state of the weather: the result of these observations has satisfied me that it takes place, in a greater or less degree, whenever the thermometer of Fahrenheit sinks more than 7° below zero. One year it happened early in December, in the other in January; periods when the buds must have been entirely in a dormant state. In both seasons the atmosphere, at the time, was clear and dry.

In November last, I pressed to the ground a few of the long trailing branches of a peach tree, planted in a low situation, and fastened them with forked sticks. I then covered them with a small quantity of dry asparagus tops, not because I preferred them to straw, but they were at hand. A few days after the severe morning of the 27th December, (when my thermometer stood at 7° below zero,) I examined the tree, and could not find a sound bud, except those on the covered branches, which were all safe. I shall allow them to continue covered, to ascertain whether, or not, they will remain inert until all danger of injury by spring frosts is over. If you deem this experiment sufficiently interesting for your notice, I will inform you of the result.

It is eight years since I became a resident of this

country. In three of those, our peach trees have borne fruit, but only a full crop in one. Some seasons they are destroyed in all situations; in others, the buds are killed entirely in low grounds, partially, and near the bottom of the tree, on higher lands, while those on the highest hills escape entirely. When an orchard is planted on the side of a hill, you can almost determine the exact line of frost, at the time of blooming.

With much respect, your obed't serv't,
J. S. SKINNER, Esq. GILBERT T. PELL.

PRINCE'S FRUIT TREES—VINES, &c.

Mr. W. PRINCE, Alabama, Dec. 2, 1826.

Sir,—With much pleasure I give you an account of the fruit trees, vines, &c. transmitted to me from your establishment last spring.

The time they remained in the box in which they were originally packed was two months and seven days. They were taken out as late as the 7th day of March, and planted without any unusual care.

Of the apples, you forwarded twenty four kinds—I lost one tree.

Of grapes, I received nine kinds—I lost one from accident.

Soft-shell almonds, grew equal to any peach trees in the country—lost none.

Peaches—lost none; they grow admirably.

Figs—lost none; the same remark may be made of them.

The fine *Vergalien* and *St. Germain* pears grow well. If the growth of the tree is any promise of fruit, we have ground to expect the finest pears.

The extraordinary growth of fruit trees cultivated in this section of the United States, is generally known. The growth of the apple trees from your establishment, I found equal to the trees of the country, (generally,) cultivated under similar circumstances.

I shall forward you an order in a few days for some additional kinds of fruit.

I am, respectfully, your obed't serv't,

JAMES MAGOFFIN.

P. S. I expect you will receive several orders for the spring, from this state, for the wine grapes of Madeira, Bordeaux, Burgundy—the Tokay, Sweet-water, &c.—also, the silk mulberry, as the public attention is directing fast towards those objects, and which will shortly, I am persuaded, prove a part of the wealth of this state—it being admirably calculated, from soil and climate, to produce the finest wines and the best silk. J. M.

HORTICULTURAL ITEMS,

From Loudon's Gardeners Magazine for 1826.

Among the new and remarkable varieties of fruit presented to the London Horticultural Society, we notice the following:

“Esopus Spitzenbergh apple, an American sort, requiring the protection of a wall; large, beautiful, and of an exquisite flavour. It is said to have originated in the neighbourhood of Albany. By Geo. Caswell, Esq., in his garden at Saccombe park, Hertfordshire.”

This apple, if I am rightly informed, was first produced as a seedling, in the garden of the ancestors of General Stephen Van Rensselaer, near this city. It shows indications of having passed its meridian, as both the tree and fruit seem to have deteriorated. In some situations, however, particularly on the alluvions of the Mohawk, it still retains its high reputation. And I think from calcareous soils it is more bland, or less acid, than from soils which are not so. It has been the most esteemed dessert apple of our orchards; and it cannot but be gratifying to the lovers of good fruit to learn, a new seedling Spitzenbergh, in Ulster county,

mises to supply the place of the declining parent. The fruit is rather more flat, and somewhat less acid, and yet possesses the high flavour of the old variety. I introduced it into my nursery in 1825.

Among the books presented to the same society, I notice several volumes of the American Farmer, and the Memoirs of the New York Board of Agriculture.

Action of poisons upon the vegetable kingdom.—M. T. Marut, of Geneva, has lately made some curious experiments upon the effects of poison upon the vegetable kingdom. By causing plants to grow in poisonous mixtures, or by introducing poisons into their system, it was found that the effect upon vegetation was nearly the same as upon the functions of animals. The experiments were generally made with plants of the kidney bean, and the comparison was always made with a plant watered with spring water.—*Jour. Roy. Inst., Oct.*

[We have two diseases, one of the plum and the other of the pear and apple, which I have long ascribed to animal poisons. That the canker of the plum and morello cherry is owing to something more than an extravasation of the natural sap, is evident from the fact, that the natural sap, or prepared juice, of stone fruit, becomes a vegetable oxide, or gum, on coming in contact with the oxygen of the atmosphere; and also from another fact, that gum has only a slight tendency to putrefaction, and but partially and seldom affects the health of the trunk or branch from which it exudes. The canker of the plum, on the contrary, seems to undergo a rapid decomposition, is in a short time reduced to an impalpable powder, and if left to its natural course, soon poisons and destroys branch, trunk and root. This disease is not owing to climate, to soil nor to aspect: for where care is used to cut off and burn the affected branch, the disease is stopped; and where these precautions are omitted, it continues to increase. The experiments of M. Marut show, that an animal poison, injected into a tender branch, might cause tumors; that the poison might be disseminated in the sap, and produce ultimate death.

I have read much that has been written on the disease of the pear, but nothing that has been perfectly satisfactory. The disease shows itself first in the extremity of the branches. The leaves and bark become brown, then black, and the limb is found to be dead to its extreme point. Some have found insects in the bark, and in the pith of the affected branch. I have not been able to discover any, on critical examination. I therefore suspect that they are rather a consequence, than a cause, of the disease. On examination, I found that the dark, or diseased colour, extended farther down the branch in the *cambium*, or the new forming concentric layer, than in either the bark or sap wood. I inferred from this fact, though I do not intend to say that my inference is correct, that poison had been injected into the *cambium* through the bark, near the extremity of the limb, and had been carried down, by the descending sap, to the extent of the affected part; and that the vitiated sap and the disease had been stopped only by the want of circulation or propulsion in the extremity. For it will be remembered, that sap must pass to the leaves, and be elaborated, before it can pass down between the bark and sap-wood.]

Grapes.—The physicians of Geneva send some of their patients to the Pays de Vaud, during vintage, to take what is called a regular course of grapes; that is, to subsist three weeks entirely on this fruit, without taking any other food or drink. In a few days a grape diet becomes agreeable, and weak persons, and also the insane, have found great relief from subsisting on it for three or four weeks.

[I can corroborate the value of "a course of grapes" from personal experience. When recover-

ing from a severe bilious fever, my physician permitted me to eat grapes and peaches. They constituted almost my entire diet for weeks; and I experienced no injury, but essential benefit from their use.] J. B.

LADIES' DEPARTMENT.

(From the Saturday Evening Post.)

MRS. JOHN Q. ADAMS.

Mrs. Adams, the wife of our present President, is the daughter of the late Joshua Johnson, who married an English lady in London prior to the revolutionary war, where he was established as a merchant, of the name of Nuth, and was appointed Consul at London by General Washington; which place he filled during fifteen years, in which time a large portion of his hard earned property was expended in saving from impressment, from starvation, from sickness and suffering, and for funeral expenses when dead, a number of American seamen; some of whom no doubt are living, and can testify to the fact. For these services Joshua Johnson never was remunerated by Congress. The office was a humble one, but that is certainly a useful one, however obscure, on which depends the lives and liberties of so large a portion of the community, whose rights are, or ought to be as dear to the nation as those of any of its citizens. Joshua Johnson returned to his native country with a family of eight children, under the expectation of possessing a handsome property. His hopes were blasted by the treachery of his partners; and he was reduced to a state of the utmost distress. In this dreadful emergency, the late Mr. Adams gave him the place of Superintendent of Stamps, which enabled him to maintain his family; and their gratitude to the good old gentleman, who dared to do this charity against the advice of his nearest friends, is as great as was his noble liberality. This office was taken from Mr. Johnson about two or three weeks before he died, and he was again left destitute, with the horrible conviction that he left his widow and family penniless, and dependant upon the charity of their relations, and the exertions of an only brother, whose extreme ill health rendered his exertions, however meritorious, insufficient to provide for them. Joshua Johnson was one of eleven children, of a respectable and wealthy family from Calvert county, Maryland.* He was one of seven brothers, the eldest of whom, Thomas Johnson, was appointed by General Washington to the Supreme Court, who was offered the situation of Secretary of State, and who was the first Governor of the state of Maryland after the acceptance of the constitution —

*The family estate is on the right bank ascending the Patuxent river, at the north entrance of St. Leonard's creek. It belonged to the Editor of this paper during the war, when every shingle on it was burned by the enemy, in pursuit of Barney's flotilla. The Editor was then the agent for flags of truce and prisoners of war, and the medium through whom the intercourse was held between the government and the commanders of the enemy's forces. This intercourse, and the interchange of friendly offices connected with it, begot, as far as was consistent with the duties of the parties, a kindly feeling, and much regret was expressed when they learned that the property burned belonged to Mr. Skinner. An order was afterwards issued, with which he was subsequently furnished with a copy in the handwriting of Admiral Sir George Cockburn in the following words. The sheep were pure merinoes, then of great value.

H. M. Ship *Albion*, July 13, 1814.

It is my directions that the out buildings, stock, and particularly the sheep, on the property situated on Smith's point, on the northern entrance of St. Leonard's creek, is neither molested nor destroyed.

G. COCKBURN, R. Admiral.

To the commanding officer of any detachments which may land on the above property.

Governor Johnson, with five of his brothers, served in the Revolutionary armies, and the youngest son of the family, Roger Johnson, now living near Fredericktown, Md. would also have served, but was prevailed upon by his brothers to take charge of their families, in those "times that tried men's souls."

Mrs. Adams is one of the eight children; seven of whom were daughters. She was born in London, received the early part of her education in France, at Nantz; and accompanied her parents to England after the war, in eighty-three, when she, with her sisters, was put to an English school, to learn English, of which they could not speak a word. In London, she became acquainted with John Quincy Adams, and there was married to him, in the presence of her family, Judge Thomas Adams, and Mr. Joseph Hall, late Sheriff of Boston—by the Rev. John Hewlett, at the church of All Hallows, Wapping, near Tower hill. She was married under the most propitious circumstances; but ere the honey moon had sped its flight, those prospects were blighted, by one of those calamities to which the most honest and cautious merchants are liable, and she lost the little property forever which she expected to bring to her husband, and became a beggar, with the appearance, of what was infinitely worse to her *proud spirit*, of having palmed herself upon a family under the most odious circumstances. God alone who knows all the secrets of the heart, knows the truth, and in him she relied in all her troubles. Her father sailed for America three or four weeks after her marriage, and in a short time, sinking under affliction and ill health, she accompanied her husband to the Court of Prussia; where, during a four years' residence, in an almost uninterrupted state of ill health and suffering, she was treated with very uncommon kindness by the present King, and his late beautiful Queen. One instance of which must be mentioned among many to prove a mark (not of assumption) but of the indelible gratitude imprinted on the mind of a stranger, who had no claims but those of humanity, her youth and her helplessness. At the time of the birth of G. W. Adams, her eldest son, the situation of Mrs. Adams was very dangerous for two or three weeks throughout the time. The King and Queen sent daily to inquire how she was, and to prevent her sufferings from being aggravated by the exercising of the military, or the noise of carriages, gave orders that a bar should be placed across the streets, that nothing should disturb the quiet of her residence. That lovely Queen is gone to sojourn among her sister angels, in a world of everlasting bliss.

Before Mrs. Adams was able to walk, she left Berlin, with her husband and infant, then seven weeks old; being carried to her travelling carriage in a chair, by her husband, and Mr. Thos. Welsh, his Secretary; and she could just walk alone when she went on board the *America*, commanded by Capt. Wills, at Hamburg. She arrived in Philadelphia on the 4th of September, 1801; and there, for the first time, parted with her husband, who went to Boston to visit his parents; while Mrs. Adams with her infant, pursued her route to Washington, for the same purpose. Two little months she passed with, and literally in the bosom of her family, with that glow of affection which gladdens and delights a feeling heart. Her husband then joined her, and they set forward on their journey to the north, the grand-parents of her little boy being very desirous to see him. Mr. Johnson wishing to introduce his daughter to her relations, accompanied her, and on the road to Frederick he fell sick; and after eight days passed in painful anxiety, Mrs. Adams was obliged to proceed on her journey to Boston, where she arrived late in November, 1801. She never saw her father more! he died at Fredericktown, at his brother's, Col. Baker Johnson, in the April of the following year.

After a residence of eight years in America, (in Boston and Washington, alternately) during which time she gave birth to three sons; John, born in Boston, 4th of July, 1803; one born in Washington, June 22d, 1806, dead; and Charles Francis, born in Boston, 18th August, 1809; Mrs. Adams again accompanied her husband to St. Petersburg; almost heart broken at leaving her two eldest sons behind; who, it was concluded by her husband and their grand parents, must renew their education in America. Her sister, the present Mrs. W. L. Smith, went with her. Their residence in St. Petersburg was rendered painful by the news of the loss of several of their nearest relations, and the loss of Mrs. Adams' only daughter, who was born and buried in that inhospitable clime. Here again she was treated with every marked distinction and kindness by the late Emperor Alexander, and the Empress' mother of Russia; and here again this is only noted as a tribute of gratitude. Mr. Adams was ordered to Gottenburg to meet the Commissioners, from whence he went to Ghent; deeming it possible that he should be ordered back to Petersburg if the Commission was unsuccessful, he thought it prudent to leave Mrs. Adams at St. Petersburg; and she remained there alone with her little son from July to February, 1814-15. Mr. and Mrs. Smith, and the young American girl who had gone out with her, having left Petersburg for America, Mr. Adams left it in April, 1814. It was while she was left alone, that the Empress' mother, on all occasions, declared herself Mrs. Adams' protectrice. The war with America had cut off all communication, and the situation of Mrs. Adams was made more painful by the impossibility of hearing from her children.

She received an order from her husband to dispose of their furniture, &c. and join him in Paris. In the sale of his property, she became the prey of sharpers; a thing of course, when a wife is left by her natural protector; and left St. Petersburg, after taking leave of the Empress' mother, on the 19th of February, 1815, with two men servants, a French waiting maid, and her son Charles; only one of these persons being known to her. Every thing had been done by the Russian government through the medium of Mr. Harris, to make her journey easy, and in all the towns where she stopped she was most kindly received. At Nerva, the Governor waited on her and informed her that apartments were prepared for her at his house, to which he gave her a most polite and urgent invitation. At Riga she was received in the same manner; and during four or five days which she passed there, the Governor insisted upon her dining with him and his lady every day; and made an entertainment expressly to introduce her to the first people in the place, to whom she was under the necessity of speaking German, a language with which she was but little acquainted, and which she spoke with great difficulty. Mrs. Adams completed her journey as far as Berlin, having met with no other accident than losing the fore-wheel of her carriage. In this city she was obliged to remain until two new wheels could be made, for which she waited eight days. There again she was most kindly received by her old friends. Again she proceeded on her journey; and soon afterwards heard of the return of the Emperor Napoleon to France. At Frankfort on the Maine, her two men servants deserted her; and so great was the general consternation, the merchant to whom she had letters could only get a boy of fourteen to attend her, and with this servant she was obliged to be satisfied. Pursuing her course through the grand duchy of Baden, by the advice of the merchant, as he did not think it would be safe to go to Magdeburg, Mrs. Adams accomplished her journey to Strasburg, still travelling night and day, without accident or difficulty. At Strasburg she procured a most discreet and excellent

servant by the recommendation of the master of the hotel, where she was obliged to remain one day in consequence of the detention of her baggage, which was, however, returned to her unopened, through the medium of the passport procured from the French Minister at Berlin. The difficulties of the journey were not a little increased by the general excitement into which the country was thrown, by the return of Napoleon; the troops being all on their march to join him, and not in the best state of military discipline. But she arrived safe in Paris, where she was again placed under the protection of an affectionate husband, a woman's safest and best sanctuary; who in consequence of the perfect quiet of Paris, was much surprised to hear of her "hair breadth escapes." After a short sojourn in Paris, waiting for instructions, the family went to England, and Mrs. Adams was joined by her two children, where they resided two years, in a small but beautiful village ten miles from London, the expense of an establishment in the metropolis rendering a residence therein impossible. Mrs. Adams' health was such when she left England to return home, that her physician thought it necessary to inform her, that her life would be endangered by the voyage. The prediction was nearly fulfilled; but after severe suffering she reached her home in America, where she has resided until this time, in the city of Washington. Mr. Johnson, fearful lest his long absence from his native country, should deprive his children of the rights of citizenship, through the influence of his friends, had them naturalized in the Legislative Assembly of Maryland, where their names stand recorded.

Mrs. Adams is a woman of unassuming manners, fond of reading, writing and knitting, and detesting politics, and in such general bad health, that she seldom leaves her chamber; and during this winter has only done so at the drawing rooms to show her sense of the respect due to the public. The only motive of the writer in publishing this piece, is to refute, by a complete statement of facts, the preposterous fables which have appeared concerning the birth of this lady. Having never before appeared in print, and possessing no ability for authorship, she is indifferent to criticism, and careless of effect, so long as she has the happiness to show that Mrs. Adams is the daughter of an American Republican Merchant.

INTERNAL IMPROVEMENT.

The Legislature of the state of Virginia has passed a law, confirming the charter of the Baltimore and Ohio Rail Road Company, with only these alterations: 1st. That the road shall not touch the Ohio river lower down than the mouth of Little Kanawha river; that the damages for property taken or used for the construction of the road, &c. shall be determined as such affairs are now effected by the laws of the Commonwealth of Virginia; that the penalty for injuring the road or property of the company, shall be the same as is inflicted for the same offence against the public works of Virginia; that is, the penitentiary. The bill passed both houses of the Legislature by an almost unanimous vote. [Nat. Intel.]

LEGISLATURE OF MARYLAND.

Annapolis, March 10, 1827.

A bill from the House of Delegates, on the subject of internal improvement, has just passed the Senate. Affirmative, Messrs. Forrest, Heath, Johnson, Kennedy, Marriott, Nelson, Sewell—7. Negative, Messrs. Dennis, Harrison, Reese, Whitely—4. Several senators, friendly to the bill, were absent.

This bill accords with the wishes of the Chesapeake and Ohio Canal Convention, and repeals the

provisos in our internal improvement law, which prevented the State of Maryland from becoming subscribers to the amount of half a million of dollars to the Chesapeake and Ohio Canal. It also allows the same amount to the Susquehanna Canal, and authorizes an advance of twenty thousand dollars to the Chesapeake and Delaware Canal.

Maryland has, therefore, taken her stand in favour of internal improvement, and her policy will remain unchanged for many years; during the term, at all events, of the present Senate, who hold their seats until September, 1831.

Maryland has shewn, that she is ready and willing to use all the means in her power, to promote the happiness of her citizens and the welfare of the whole Union. [Ib.]

SPORTING OLIO.

RIDE AND DRIVE.

Mr. Bullock's match, to drive three miles in harness, in 13 minutes, for 150 sovereigns, from Hounslow heath (opposite the Powder mills,) to Bedfont lane, a measured three miles; and a second match, for 100 sovs. that Mr. Field's American mare did not trot (saddle,) the three miles in 10 minutes, carrying feather weight, took place on Thursday, October 19. Mr. B. made both matches, and his groom rode saddle. The master drove as follows: The first mile in 4 min. 3 sec. (having once to back the wheels for breaking into a gallop); the second, in 3 min. 35 sec.; and the third, in 3 min. 40 sec. winning the match tolerably easy.—6 to 4 on time.

In the second match, the boy rode 7 st. 4 lb. and did as follows: First mile, 3 min. 9 sec.; second 3 min. 12 sec.; and the third, leisurely, in 3 min. 30 seconds, winning by 9 seconds easily.—2 to 1 on the mare. [Annals of Sporting.]

THE FARMER.

BALTIMORE, FRIDAY, MARCH 16, 1827.

RINALDO.—Extract to the Editor from a gentleman, than whom there is no better judge in the state of Maryland. Rinaldo is now in Baltimore—no disposition has been made of him for the ensuing season. Proposals will be received, and the horse exhibited on application to the Editor of the American Farmer. He is by Sir Archy—a fine bay, and in all respects equal, in point of blood, to any horse in America or Europe.

Londonderry, near Easton, March 14, 1827.

DEAR SIR,—I received your letter last evening, and agreeably to your request, though with much reluctance, send you Rinaldo; the best horse in my opinion we have ever had on this shore; and I fear it will be long before we shall see his like again among us. A press of business upon my hands, want of stablage and groom, made it impracticable for me at this time, to make arrangements for his accommodation; and I was not seconded by my brother farmers, with either zeal or liberality. No horse can be better calculated than Rinaldo to propagate a progeny calculated to subserve all the useful purposes of man. He has the hardness of constitution, strength and powers of the coach horse, with the activity, wind and fire of the English courser. His blood throughout is unexceptionable, and that portion of it from Janus, invaluable.

He is a horse of fine temper. On the road bold and fearless. Nothing can intimidate him; and in the stable he is quiet, peaceful, and easily governed by a boy. Some Kentuckians viewed him at my stable, since you were over, who were excel

judges, and pronounced him, in point of figure and action, equal, if not superior, to any horse they had ever seen, except *Bertrand*; and that his action in walking, was nearly equal, and much like, that celebrated horse. I wish him every success; and have no doubt if he goes to Jersey, that many hundred dollars will go from this state to purchase some of his progeny at some future period.

EDWD. N. HAMBLETON.

The celebrated horse *SIR ARCHIE*, about 22 or 23 years of age, stands to cover mares this season, in Northampton county, North Carolina, at 75 dollars a mare.

CONTENTION, at New Market, near Petersburg, at \$25 a mare. He is a colt of *Sir Archie*—his dam by the imported horse *Dare Devil*.

ARAB, another son of *Sir Archie*, stands at Diamond Grove, Brunswick county, Virginia, at \$30.

TOBACCO.—One hoghead Ohio tobacco sold last week for \$33 per hundred—one at \$26, one at \$24, one at \$20, one at \$15, one at \$14—and three stayed, being in too high condition, at \$12.50. Not much coming in. The expectation is 8000 from that state, of last year's growth. Little doing in Maryland tobacco; prices about the same as at our last report; low qualities have rather declined. The shipments from this port are said not to have turned out so well as those from the Potomac. It is expected that in a few weeks some "stir" will take place in this branch of business.

COMMERCIAL RECORD.

By the arrival of the ship *Robert Fulton*, Capt. Britton, at New York, we have received Liverpool papers to the 9th, and London to the 7th February.

The London Morning Chronicle of the 7th says, the Portuguese affair having come to an end, commercial men appear to be again turning their attention to home politics, and the forthcoming proceedings in Parliament, with regard to the Corn laws, are anxiously looked for. There is not much doing in the produce market, but business is far from being bad. Sugar was in good demand to-day. The uncertain state of the Corn laws has a bad effect upon the spirits' market. The occasion of the advance in turpentine and the extensive speculations, is the facility of extracting gas from turpentine.—Rosin has advanced 15 to 20 per cent. on account of some experiments of extracting oil.

Intelligence to the 19th January had been received at London, furnishing additional particulars of the operations of the royalists against the rebels, in Portugal, who have been put down at almost every point.

The British Traveller states, that it is currently reported in the city, that in consequence of some misunderstanding, there is to be a change in ministers, and that the Earl of Westmoreland and Mr. Robinson will retire.

Corn Laws.—The following circular has been issued to the members of the House of Commons from the Treasury:—"Immediate. Your attendance is most earnestly requested upon the resolutions respecting the corn laws, on Monday, the 19th of February, instead of Monday, the 12th, the day mentioned in the notice paper of the House of Commons."

The stud of the late Duke of York sold for 8000l. His famous horse *Moses*, sold for 1000l. to the Duke of Richmond. The total amount of his property is 180,000l.; his debts 300,000l.

Liverpool Cotton Market, Thursday, Feb. 8.

We have experienced a steady demand this week from the trade, and although there is no reduction

in prices actually quoted, some very low sales have been made. The imports are light, being only 1630 bales from America. The sales amount to 10,000 bales. There will be offered at auction to-morrow, at the public sale room, 1500 bales Uplands.

Bowed, Georgia, 6½ to 7½; New Orleans, 7½ to 8½; Sea Island, 1s. to 1s. 7d.; Rice, Am. 18s to 22s. 6d.; Flaxseed for crushing, 40s. to 42s.; Turpentine, 11s. to 13s. 6d.; Rosin, 6s 9d. to 7s. 3d.; Ashes, fresh pot, 28s. to 30s.; Montreal, 26s 6d.; American, 1st qual. Pearl, 27s. to 29s.; Montreal do. 26s. 6d. to 27s. 6d.

ERRATA.—In No. 50, p. 394, the second paragraph of Dr. Muse's Address, should read thus:

Before us, is presented this gratifying spectacle; a second exhibition of agricultural merit and energy; the early fruits of our youthful institution; the evidences of its utility; before us, with allowance for the limited existence of our society, are realized our most sanguine anticipations.

In the next column of the above Address, 7th paragraph, first line, should read, I shall offer an apology, &c.

VALUABLE STOCK, AND FARMING UTENSILS—FOR SALE,

On Tuesday next, 20th March.

Such an opportunity rarely occurs as will be presented on Tuesday next, the 20th March, for obtaining valuable domestic animals—especially *Bakewell Sheep*, of the finest quality. The subscriber, having declined farming and ended his estate, will on that day sell all his Stock of domestic animals, consisting of about 60 *Bakewell Sheep*, most of them ewes that will then have lambs; Horses, breeding Mares and Colts; Hogs of the best breed; Cows, working Oxen; Farming implements, &c. &c.

The sale will take place on the farm, two miles from Port Pean, and sixteen miles from French Town, Elkton and Newcastlc.

March 16.

THOMAS BLANDY.

THE BEAUTIFUL THOROUGH BRED STALLION

MARK ANTHONY,

Will stand this season (1897), at Fort Hill, the farm of Charles Sterett Ridgely, on Elk Ridge, Anne Arundel county, Md., at twenty dollars, which may be paid with fifteen, on or before the first day of August next. Half a dollar to the groom.

MARK ANTHONY is six years old this grass—sixteen hands high, a fine brown, and in point of beauty, symmetry of form and action, is not surpassed by any horse in this country. He was got by *Sir Archy*, his dam, *Roanoka*, was got by *Florizel*, (never beat or paid for.) He was a son of old *Diomed*; his dam by *Shark*, that ranks with the very first racers of England. *Roanoka's* dam was *Cornelia* (the dam of *Gracchus*), by *Chanticleer*, (old *Wildair's* best son,) *Vanity*, by *Celer*, (old *Janus's* best son,) grand dam by *Mark Anthony*, the best son of old *Partner*, (who himself was the best of *Morton's Traveller's* get,) out of *Selima*, by the *Godolphin Arabian*—*Jolly Roger*, out of a *Silver Eye*—which horse was imported, and the property of *Samuel Du Val, Esq.*

Pasturage will be provided for mares at fifty cents each week; care will be taken of them, but there will be no liability for accidents or escapes.

Season to commence on the first of April, and end on the first of August.

March 16.

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On the Manufacture of Cider, by J. Buel—Correspondence of G. W. Jeffry, on Fruit Trees—Implements of Husbandry—Notices of pernicious and unprofitable plants, continued—Answers to certain Inquiries—Profit of Merino Wool Husbandry—Black Currant Wine—On the Diseases of Fruit Trees—Prince's Fruit Trees, Vines, &c.—Horticultural Items—Mrs. John Quincy Adams—Proceedings of the Legislatures of Virginia and Maryland, Internal Improvements—Ride and Drive—Editorial Items—Commercial Record.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00	8 50		
BACON, and Hama, . .	lb.	6	10	9	12
BEEF-WAX, Am. yellow	—	29	30		50
COFFEE, Java,	—	16	16½	20	22
Havana,	—	14	16		20
COTTON, Louisiana, &c.	—	11	14		
Georgia Upland, . . .	—	10	11½		
COTTON YARN, No. 10,	—	28			
An advance of 1 cent					
each number to No. 18.					
CANDLES, Mould, . .	—	13	15	16	18
Dipt,	—	11	12		16
CHEESE,	—	8½	12	12	15
FEATHERS, Live, . . .	—	29	30	37	
FISH, Herrings, Sus.	bbl.	2 37½	2 50		
Shad, trimmed, . . .	—	5 50	6 00		
FLAXSEED,	bush	—	90		
FLOUR, Superfine, city,	bbl.	5 12½	5 25		
Fine,	—	4 75	4 87½		
Susquehanna, superfi.	—	5 00			
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Ind. corn, yellow	bush	50	52		
white	—	50			
Wheat, Family Flour,	—	1 10	1 20		
do. Lawler, & Red, . .	—	1 00	1 05		
do. Red, Susque. . .	—	1 05	1 10		
Rye,	—	70	75		
Barley, Eastern . . .	—	1 10	1 20		
Do. country	—	90	1 00		
Clover Seed, Red . .	bush	6 25	6 50	7 00	
Ruta Baga Seed, . . .	lb.	87		1 00	
Orchard Grass Seed, .	bush	3 50			
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed,	—	3 87½		4 00	
Oats,	—	45		50	
Beans, White,	—	1 38		2 00	
HEMP, Russia, clean, .	ton	250	255		
Do. Country	—	120	200		
HOPS, 1st sort, (1826)	lb	18		25	
HOGS' LARD,	—	8	10	12	
LEAD, Pig	lb.	6½			
Bar	—	7½	8		
LEATHER, Soal, best,	—	21	23	32	
MOLASSES, sugar-house	gal.	—	50		75
Havana, 1st qual. . .	—	31	32	37½	
NAILS, 6s20d.	lb.	6½		9	
NAVAL STORES, Tar, .	bbl.	1 50	1 62½		
Pitch,	—	1 75			
Turpentine, Soft, . .	—	2 50	2 75		
OIL, Whale, common, .	gal.	30	32	40	
Spermaceti, winter .	—	70	75	85	
PORK, Baltimore Mess,	bbl.	12 50			
do. Prime,	—	9 00			
do.	—	3 25			
PLASTER, cargo price,	ton.	3 25			
ground,	bbl.	1 50			
RICE, fresh,	lb.	3½	3½	5	
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow, .	—	5½	8	10	12
WHISKEY, 1st proof, .	gal.	31½	33½		50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	34	35	50	
SUGARS, Havana White,	c. lb.	13 00	13 50	14	15
do. Brown,	—	10 00	10 50		
Louisiana,	—	7 75	9 10	10	11
Loaf,	lb.	19	22	20	22
SPICES, Cloves, . . .	—	70		1 00	
Ginger, Ground, . . .	—	7	12	12	18
Pepper,	—	18		25	
SALT, St. Ubes, . . .	bush	55	60	75	
Liverpool ground . .	—	52		75	
SHOT, Balt. all sizes, .	clb.	8 50		12	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily,	—	1 10	1 15	1 50	2 00
Lisbon,	—	1 00	1 10	1 50	1 75
Port, first quality, . .	gal.	1 50	1 60	2 50	
WOOL, Merino, full bl'd	lb.	30	35		
do. crossed,	—	20	2½		
Common, Country, . .	—	18	22		
Skinnners' or Pulled,	—	20	25		

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